**Monsanto**

FROM (NAME & LOCATION): E. L. Kaiser - General Offices

DATE: August 28, 1970

SUBJECT: ELK Canadian Trip 8/16 - 21

REFERENCE:

TO: John Brydon - Montreal
James Overing - Toronto
Sten Roy - Montreal

cc: A. W. M. Coaker - JFQ Res.
J. R. Darby - JFQ Res.
J. Edmundson - Montreal
P. R. Graham/L. O. Raether/
C. P. Farley
J. K. Lilly
E. Muschick
L. D. Press
W. E. Schalk - WSCHA
W. F. Waychoff

Thanks again for the opportunity to meet your customers and make a pitch for Santicizer 711 and DUP. Overall, I believe the calls were successful --- as evidenced by the drum sales of DUP and sample requests for Santicizer 711. This success stemmed most of all from the excellent rapport which exists between MOCAN and its customers. This "good feeling" is all the more creditable since Jim and Sten have been calling on their current accounts only a few months.

Here are my thoughts developed during the DUP/Santicizer 711 introductions.

Ed Kaiser

EK:cm

Attachments

DSW 587423

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1. NORTHERN ELECTRIC

Contacts

Mrs. Marta Farago - Cable Materials Development Manager
John F. W. Bentham - Cable Materials Development Manager

Comments

A.T.&T. has little interest in Northern. Northern is wholly owned by Bell Telephone of Canada in which AT&T has only a minority holding. Also, unlike WECO, Northern makes power related wire and cable in addition to communication items.

DUP has been evaluated in a "TWH" insulation where a -40° impact is required. With 7-8 PHR of filler, 75 PHR of DUP pass the low temperature spec (-51°C $T_b$ correlated to -40°C 9 ft.-lb. impact) and the 21 days @120° oven aging but is unsatisfactory on electricals. The latter was determined by a quick-and-dirty method wherein concentric moats of water are contained in a molded specimen of compound. The water is charged and the polarization of the uncharged water is measured.

Long term IR's of this DUP formulation are also underway. More work is scheduled to find the blend of DUP and TOTM which can meet the above low temperature oven aging, and electrical spec.

Plastolein 9066 is used extensively in jacketing, both -40 TWH type and station wire (with DNODP). DNODA is being tested as a replacement but Farago was firm that where used alone 9066 was faster dry blending than DNODA and therefore harder to replace. Related to this, Farago finds TOTM very slow dry blending vs. DUP.

Action

MOCAN - Press for Santicizer 711 evaluation in station wire, replacing DNODP. 711 sample.

If possible get test method for short cut resistance determination. Farago described it as "Eric's Method" but was not sure if it was available outside N. E.

AWMC - Any Brabender data to confirm or deny 9066 vs. DNODA dry times.

As you know, -40° impact, 75° oven aging specs plague Canadian wire industry. I feel we need to do some formulating work around Santicizer 711, DUP, or perhaps even tri-undecyl phosphate in search of an answer. A good answer could pay off for Monsanto in both Canada and the U. S.



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cc: R. V. Johnson
R. E. Lamkin - LA

2. MORBERN INDUSTRIES (owned by Whittaker Corp.)

Contacts

Richard Poirer - P. A.
Mr. Charriton - Chief Chemist

Comments

Poirer expressed interest in our bid of 13.5¢ for their 1970 requirement. Currently they buy imported, duty paid material at around 14¢ (probably BASF) and are committed through the rest of 1970. Poirer suggested we resubmit our offer as a 1971 proposal late in September.

Right now, Morbern buys DOP on consignment in 50,000 gallon quantities. They pay for the material 60 days after its consumption. Terms obviously could prove troublesome for us.

Also they have no RR siding. According to Poirer, they take DOP in 5000 gallon tank trucks fed by the importer's tanker moored at the nearest seaway port.

A small amount of local DOP is bought on a spot basis to supplement the above. 200 M lbs. of DIDP is also bought in Canada.

Morbern emphasis on using imported DOP is simple. 80% of their casted leather cloth is exported. They get their duty back on every pound of DOP exported in their finished goods.

No real interest was expressed in Santicizer 711 or DUP. Polymerics are of general interest for oil and soap extraction resistance and low viscosities.

Action

ELK - Review 1971 DOP proposal with JKL on his return. Forward conslusion to MOCAN and Rob Lamkin.

MOCAN - Follow up polymeric interest with appropriate literature.



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cc: E. H. Fording - NY
J. A. Smoke - NY

3. CARLEW CHEMICAL

Contacts

Ralph Nobel - V. P.
Dr. Dick Miller - Technical Director
Jim Campbell - Prod. Manager

Comments

Carlew manufacturers compounds, mostly for wire and cable. They also make plasticizers for internal use and, where profitable, merchant sale.

The big surprise here was Miller, late of Hatco, late of Alpha Chemicals (Newark), now with Cary-Page and Carlew. Apparently the "Car"- of Carlew used to represent the Cary family interest when Cary Plastics was alive. What ties today exist between Carp-Page and Carlew is up for grabs. But there is Dick Miller, commuting between Raritan and Montreal.

DUP appears to be of interest only if we are willing to quote Carlew on undecanol for their own manufacture. I suspect Nobel really sees an attractive undecanol quote from us as a device to further weaken what he claims is a weak tridecanol market. Without naming names or prices he said that TD pricing now invited his more active DTDP participation.

Santicizer 711 was of interest if available duty free as a lower volatile DOP replacement.

In general, Miller theorized that the relatively poor electricals of 711 and DUP (and all linears) vs. DIDP and DTDP resulted from their increased mobility in the compound which also is reflected in their higher plasticizing efficiency.

Action

MOCAN - Are we ready to play the wheeling and dealing games which I feel Nobel has in mind for DUP and probably S-711?

JAN SMOKE - Can you ask Miller if his theory on plasticizer mobility is published anywhere and if so can we get a copy.



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4. CHEMICAL LAMINATIONS (Canadian Vinyls)

Contact

Vinod Parek - Plant Engineer

Comments

Unfortunately MOCAN's prime contact here - "Mr. Morris" - was unable to keep our appointment. The duty drawback offer on DOP was not offered.

Also the above engineer was not interested in 711's advantages over DOP.

50% of the plant output here is polyurethane. A Phosgard potential is here.

Action

MOCAN - Make DOP offer and press for 711 evaluations with vinyl formulator.

C. P. FARLEY - Follow-up Phosgard potential.



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## 5. PHILLIPS CABLE LTD.

### Contacts

Howard White - P. A.
Carl Beale - Vinyl Chemist

### Comments

Here the DUP presentation on improving electricals by reducing concentrations hit home. Beale had experienced good performance in all areas with DUP vs. DTDP and in processing a real advantage. But electrically DUP was a bomb. Beale had replaced DTDP part-for-part.

Now Beale will take a new drum for a new plant trial. This time Beale will cut DUP to just below equal room temperature physicals vs. DTDP. He is very bullish.

Only cloud on horizon - TOTM/Cereclor 8-42 also understudy. No firm results yet. Should be economically unattractive as DUP and DTDP pricing fall to near U. S. levels from above 25¢.

### Action

MOCAN - Drum order of DUP.

Follow evaluation and plant trial, making sure DUP's faster drying time and fusion is taken advantage of and that old DTDP concentration is reduced 18% with DUP.

Keep eye on TOTM/S-42 approach.



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cc: E. C. Wilde - Akron
S. Tella - Akron

6. GENERAL WIRE (Fabricon-owned by Belden)

Contact

Hans Allmendinger - V. P.

Comments

2 drums of DUP ordered for plant trial. Previous trial never got off ground due to dry blending error. All straight now.

Santicizer 429 recommended as G-54 replacement with improved dry blending advantage. Migration (?) resistance is key criterion.

Problem: In -40° impact compound 50/50 DIDA/DOZ blend (S-1215 in Canada) has mysteriously been pushed out of jacket formulation to give greasy feel and lack of physicals. Analysis indicates 50% plasticizer loss, both DIDA and DOZ. Acryloid 228 impact modifier is suspect as is impregnated paper used in construction. Detailed work request and sample of jacketing being sent to Coaker.

Action

MOCAN - 2 drums DUP.
Follow plant trial closely as per Phillips note.

ELK - Follow lab work on incompatibility problem and report results to MOCAN.



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## 7. CANADA WIRE

### Contacts

Ernie Kent - R&D Director
Len Robertson - Chief Chemist

### Comments

DUP presentation well received and will stimulate continued evaluation in place of DTDP. DTDP is not a good product in CW's eyes based on its poor processing and low temperature characteristics.

Miscellaneous matters of interest: qualitative analysis of BPA using Ferro (Harshaw) stabilizer, Triundecyl phosphate in 40° impact, test method for fusion-physicals computor study, Dr. Miller theory on straight chain electricals. (See Carlew report)

### Action

MOCAN - How is CW fixed for DUP? I do not recall whether we checked. A sample of Santicizer 711 may also be in order.

ELK - Get latest on BPA analysis reagent, fusion test method and, from New York, Miller's paper on plasticizer mobility.

LOR/CPF - How does TUF look in our future.



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cc: E. C. Wilde - Akron

8. B. F. GOODRICH

Contacts

Bill Gallbraith - T. D.
Calvin Lee - Production Manager
Ken Sutherland - P. A.

Comments

Though hesitant, Lee agreed that Santicizer 711 and DUP would be worth evaluating. Assuming our data is right the key to Santicizer 711 acceptance would be its price vs. DNODP. I mentioned that BFG - U. S. had approved 711 in place of DNODP.

DUP will be considered vs. DTDP at 1/2¢ under DTDP. DTDP pricing confused on date of call. One area of interest will be DUP combined with TOTM to improve latter's $T_f$.

Action

MOCAN - 1 gallon samples of Santicizer 711 and DUP.

Make Santicizer 711 price proposal to Sutherland.

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## 9. UNIROYAL

### Contacts

Ray Swanson - Development Director
Gordon Moore - Vinyl Chemist

### Comments

This Uniroyal location is reminiscent of their West Coast operation in the U. S. DOP, "off grade" DOP and ICI's DINP are all approved interchangeably for greatest part of Uniroyal production.

Only serious intersts beyond what our DOP price is was in the area of dry cleanable vinyl and flame retardance for auto upholstery. Re the latter, Uniroyal's attitude is "we'll believe when we see it".

### Action

CPF/GS - Another account needing more push on phosphates for vinyl and Phosgard for urethane in autos.



STLCOPCB4092768

10. GENERAL TOWER

Contacts

Loyd Atkins - P. A.
Marcel Brule - Chemist
Don Nichol - Chemist
Graham Dawson - Chemist
Paul Lussier - Vinyl Compound Manager

Comments

General Tower will begin immediately a program to displace 610 phthalate with Santicizer 711. Key areas of concern will be dry times, fusion rates and dynamic heat stability. Sounds familiar!

I will review these problem areas with Muschick and Touchette to gain from their experience at one of our U. S. accounts.

DUP is primarily of academic interest. One specific concern would be its rubber migration resistance vs. TOTM in tapes. Of general interest was the 3M patent on electrical tape. According to Dave Press, 3 M still has a patent in force in this area. The main change is that the U. S. Justice Department has enjoined 3M to more freely license others under the terms of the patent.

Action

MOCAN - Review above report on 3M patent status.

ELK - Report to MOCAN on experience on heat stability, fusion rates and dry times for 711 vs. 610 in automotive formulations.

Provide MOCAN with DUP rubber migration data vs. TOTM.



STLCOPCB4092769

cc: R. N. Brell - Wilmington
E. G. McCabe - Wilmington

11. BATA SHOE (Batawa, Ontario)
Tiga Trading Company

Contacts

John Cormack - P. A.
Tony Machala - Vinyl Chemist
Tony Cervinka - Vinyl Chemist
Ernest Magnus - Tiga Trading

Comments

Immediate evaluation will begin on drums of Santicizer 668 containing 711 in place of DNODP. Based on data presented, no problems are anticipated.

Magnus admitted that no dry blend is yet available on world-wide basis from Bellkamp, Md. Technical problems -- primarily flow --- are under study with hopes that difficulties can be overcome. Meanwhile, only compound is shipped from U. S. to Canada. Outside U. S./Canada, this compound is uneconomical.

Magnus was convinced that a workable arrangement to gain duty drawback was possible. He was confused, however, as to the details. He understood that, if deatils could be worked out, 0.75¢ of the drawback would accrue to Tiga Trading.

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