INFORMATION ON COMMERCIAL PRODUCTS

One activity of the National Conservation Advisory Council's Committee on Scientific Support has been to identify the kinds of information which a conservator might be able to obtain from a company supplying a product used in conservation. Committee member MARY KAY PORTER contacted various companies that manufacture adhesives. It is anticipated that these contacts can be maintained so that product changes or additions can be monitored and significant information conveyed to the conservation community. Based on her experience MRS. PORTER here describes how one can best go about obtaining product information from a manufacturer.

Conservators use a variety of commercial products, many of which are intended for a market having requirements other than those of importance to the conservator. To create a more informed use of such products, it seems reasonable for a user to acquire as much product information as possible. Ideally, the conservator should be able to predict responses of the product to solvents, light, heat, etc., should be able to work out formulations for specific applications, and should be aware of problems relating to health hazards or undesirable impurities. The following summarizes a reasonable procedure to follow when requesting product information. Results will vary and depend upon many factors, including the nature of the contact, the need for the information, and the ability and desire of the company to respond to the question asked of it.

The person in industry to whom such inquiries should be addressed is often called a technical representative or technical service manager. Depending upon the size of the company, he or she may be associated with the sales department or with the advertising department. If possible, the area of interest should be specified in the address (i.e., write to "Technical Representative, Polymers"). In many cases the conservator will, as a result of reaching the right company department, be dealing with a technically trained person who knows general aspects of the product. The individual is generally not an expert in all details of the product's composition but such experts are usually found in the research lab. Access to the latter is possible but not always easy.

What information might be requested? Specific data can usually be obtained concerning a product's content and purity; specifications on properties (including physical ones such as the solubility parameter of a solvent); the results of testing (for example, on the reversibility of an adhesive); the the date of the most recent change in formulation; the commercial names of the product on foreign markets; and health hazards entailed in product use and related safety precautions. Generally, written inquiries should be kept short and simple. A follow-up phone call often expedites a response and may even produce new data.

If possible, an inquiry about a product should include the name of the product, the manufacturer, and the generic class to which the product belongs. "Generic class" means the general chemical class such as polyvinyl acetate homopolymer, long oil alkyd, or cellulose acetate-butyrate. The generic name along with the specific product name and that of the manufacturer will enable a technical salesperson to find a closely similar if not identical product in the future. One should not simply say "for this treatment we normally use polyvinyl acetate (or butyl methacrylate). Rather, it is advisable to say "Union Carbide polyvinyl acetate AYAA" or "DuPont isobutyl methacrylate 2045."

Responses will vary. Some companies have excellent, frequently-updated literature that contains product content, specifications (physical properties), and safety information. With it in hand, a conservator can decide what further questions need to be asked. In contrast, some smaller companies will be helpful if you are calling on a day that the chief chemist might have some free time.

Generally, one can determine the composition of at least 90% of a product. Be sure to check out all the angles. Rohm and Haas recently sent some very useful "Material Safety Data Sheets" that revealed substances composing as little as 0.08% of the total weight of the products described. However, one cannot expect to know 100% of a product's contents. Indeed, a difference of a few percent in composition may exist between batches since that variation is tolerated for most commercial applications.

One may receive more help when requesting test results or product specifications, depending upon the interest of the person contacted. Remember though that conservation is generally a very small part of the market and obtaining data depends mostly upon the technical service person's good will. Furthermore, much testing is in-house information and is not easily released.

Usually, the most information has been obtained when there is a definite problem or question. The technical salesperson usually responds well to this approach and will try to answer the question or solve the problem. The more specific information the conservator provides the better. For example, it would be worth stating, that what appears to be a plasticizer has been detected in an infrared spectrum of an adhesive. Trade secrets will rarely be revealed, but you may get access to test resuts or to a scientist interested in your problem. Sometimes if a colleague with a similar problem also contacts the company it may think more about your request. Professional affiliation should always be mentioned.

In summary, one needs to be realistic about what to expect companies to provide. Inquiries should be as specific as possible. An informed inquirer is generally the most successful. Results from the inquiry should usually provide a general profile of product composition, application, testing, and safety data. New products or possibly better products can be identified and product content verified so that later changes can be monitored. The more exacting demands of conservation may require separate analytical services, tests, opinions, or an alternative product. Certainly the exchange with industry can be helpful, and often educates the technical representative to a need he or she may have hardly known to exist.

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BHT (di-tertiary butyl p-cresol) is the simplest member of the "hindered phenol" family of anti-oxidants. It has been often shown, and is widely known, that it is slightly volatile and therefore tends to migrate. This has the effect of reducing its effectiveness as a stabilizer, despite its excellent anti-oxidant properties.

However, it is still the most commonly used anti-oxidant for low density polyethylene (LDPE), but is normally added in the 50-500 ppm region. For polyethylene sheets of average thickness, say 4 mil (0.1mm), it means that at maximum there are 5 micrograms of BHT per square centimeter. If it all migrates to the surface (which is doubtful) it is possible that it could be perceived as a "scum." This low level is not likely to pose a hazard for artifacts in contact with it.

For a polyethylene container with walls of 2mm in thickness the situation is somewhat different. The level of BHT is much higher per unit area; 0.1 milli-

grams per square centimer. Even if partial migration occurs, it is likely that a surface deposit would be easily visible. Under the warm, dark conditions described by SARA WOLF, (AIC Newsletter, 5/81, p. 9) this is quite likely to occur, and the danger is that BHT could sublime from the interior of the box and enter an artifact or its wrappings. For the reasons described below, the BHT could become yellow, hence straining could be the end result.

Why does BHT become yellow? The probably reason is because of its anti-oxidant function. It has been shown to be an efficient trap for free radicals, hence stopping the progagation of oxidation processes. Quinone-like compounds are formed as a product and these are yellow, or sometimes orange.

It would be a pity to scrap these useful and otherwise ideal storage containers;so one simple approach would be to check the boxes regularly (perhaps annually) and wash them if it becomes necessary. Cool storage conditions would also be preferred. Another suggestion is to not seal the boxes; leave the lids off, or punch holes.

BHT is always likely to find some use as a stabilizer although it is not by any means the best available, since it has FDA approval as an indirect food additive.

David W. Grattan,
Canadian Conservation Institute

CONFERENCES, SEMINARS, COURSES

August 31-September 4, 1981. SOCIETY OF AMERICAN ARCHIVISTS Annual Meeting in Berkeley. Write: SAA, 330 S. Wells, Suite 810, Chicago, IL 60606.

September 8-11, 1981. INTRODUCTION TO PROPERTIES OF SOLVENTS, ADHESIVES, CONSOLIDANTS, AND OTHER POLYMERS. The course, taught by Drs. DONALD SEBERA, PETER SPARKS, and Thomas Brill is open to anyone interested in art conservation who has a basic knowledge of chemistry. For information contact: Campbell Center, Mt. Carroll, IL 61053.

September 14-19, 1981. FIRST INTERNATIONAL SYMPOSIUM ON ARCHAEO-METALLURGY on Site. The Institute for Archaeo-Metallurgical Studies, Institute of Archaeology, University of London will hold a triennial symposium on site in the major centers of ancient metal production. The first to take place in EILAT, Israel, will combine papers and discussions with tours of related archaeological sites. Contact: Secretariat, 1st International Symposium on Archaeo-Metallurgy on Site, P.O. Box 29784, Tel-Aviv, Israel.

September 15-18, 1981. ICOM WATERLOGGED WOOD WORKING GROUP conference, in Ottawa. Contact: Waterlogged Wood Conference, P.O. Box 9270, Terminal, Ottawa, Ontario, Canada K1G 3T9.

September 17-18, 1981. METHODS IN MUSEUM PHOTOGRAPHY. Black and White methods of examination of works of art, taught by Sheba Haner, staff photographer, Intermuseum Conservation Association, Oberlin. Both courses are offered by the CAMPBELL CENTER FOR HISTORIC PRESERVATION STUDIES, a learning center for the restoration and conservation of historic cultural properties. Summer courses included: Stoneworking; Woodcarving; Ornamental plaster; Care of Historic Collections; Furniture conservation; Historic preservation maintenance. Write: The Campbell Center, Box 66, Mt. Carroll, IL 61053.

September 21-25, 1981. Sixth Triennial Meeting of the ICOM COMMITTEE FOR CONSERVATION, in Ottawa. All 24 working groups will meet during this time. Contact: Conference Secretariat, 700-71 Bank St., Ottawa, Ontario, K1P 5N2 Canada.

September 27-October 11, 1981. FROM PRINTING TO BOOKS. A cultural tour, limited to 18 people, on the art of printing and fine book-making through the ages in France. The group will visit the Richard de Bas Paper Mill, Museum of Prints in Epinal, National Library, Museum of Printing in Lyon, Imprimeria Nationale, Conde Museum, and the restoration facilities of the Archives and National Library. Contact: Dynamic Tours, 369 Lexington Ave., New York, NY 10016 (212-286-9494).

October 2-4, 1981 -- The International Sculpture Center will host a Workshop on the Conservation of Outdoor Sculpture at the Johnson Atelier Technical Institute of Sculpture in Princeton, New Jersey, October 2-4, 1981. The Workshop, intended to promote an exchange of information among professional conservators and those interested in outdoor conservation, will include panel discussions, question-and-answer periods and technical demonstrations. Discussion topics include: "The Effects of the Environment on Ferrous Metals" with Peter Gaspar of Washington University, YOUNGJA LEE KIM of Princeton University and others; "The Effects of the Environment on Non-ferrous Metals: with PHOEBE DENT WEIL of the Center of Archaeometry, St. Louis, TOM CHASE, Freer Gallery of Art, Washington, D.C. and others; "Conservation of Stone/Erosion Protection" with STEVE TATTI, Conservation Consultant of Washington, D.C., Norbert Baer of the Institute of Fine Arts in New York and others; "Sculptor/Fabricator/Conservator: Who is Responsible When a Work Begins to Deteriorate?" with Andrew Todd of the National Museum of Canada, Bruce Gitlin, Fabricator of New York and others. Demonstrations will focus on current techniques in the conservation of ferrous and on-ferrous metals and stone. Registration is $150.00 if submitted before September 15 and $175.00 after that date. Since registration is limited to about 50 registrants, those people registering early will be given priority. Send registration or inquiries to: MARY ANN PRYOR, Director of Conferences and Events, International Sculpture Center, 1800 Wisconsin Avenue, N.W., Washington, D.C. 20007, (202-965-6066).