



BENEFITS and PROGRAMS

Pine  **Chemicals**
ASSOCIATION INTERNATIONAL

*The global resource for
the pine chemicals industry*

Message from the President

The Pine Chemicals Association International (PCA) is the only international association dedicated exclusively to the global pine chemicals industry since its founding in 1947. The overall purpose is to promote the general development and improvement of member companies by fostering greater understanding and knowledge of the pine chemicals industry, as well as, representing the industry as a whole on an international basis.

Pine Chemicals are environmentally friendly products that use natural, renewable products as primary raw materials originating from sustainable forestry sources. The chemicals produced by this industry are used in consumer products such as flavors and fragrances, vitamin intermediates, disinfectants, inks, adhesives, paints, papermaking, synthetic rubber production, soaps and mining chemicals.

The association exists to serve its membership, which is accomplished by being both proactive and reactive on key issues affecting the pine chemicals industry, hosting seminars and conferences, and providing publications, bulletins and consultation services to its member companies on an ongoing basis. PCA members include forest owners, rosin and terpene producers and consumers of crude gum tapped from pine trees, and producers, consumers and users of papermaking co-products, including tall oil rosin, tall oil fatty acids and terpene chemicals, as well as, academic and research organizations, engineering firms and equipment, packaging and transportation distributors and suppliers within the industry.

Today, our industry is undergoing many changes and challenges including major shifts in global supply of rosin, intrusion of low cost hydrocarbon resins that are competing with rosin use in inks and adhesives, competitive substitutes for TOFA in the production of dimer acid, challenges to CTO availability due to governmental mandates and incentives for biofuel use, and regulatory challenges around the globe.

The good news is that our products are renewable and based on sustainable forestry. However, if ever there was a time for our association to make a difference and bring value to our industry efforts, now is the time.

By sharing best practices, sponsoring educational seminars, advocating for our industry and addressing regulatory challenges with facts and good science, the Pine Chemicals Association International will continue to bring value to our members and to our industry.

Our PCA committees are the backbone of our association and they continue to be quite active and productive, as can be seen from their updates in this report.

A few of the highlights include: the planning of a “Recovery Short Course” in mid-2019, our annual presentation of safety awards to be held during the International Conference, continued cooperation and support of HARRPA in their efforts to assure CTO is available for all uses without governmental mandates or incentives unbalancing the supply and setting artificial values.

The 2018 PCA International Conference that will be held in Lisbon, Portugal, at EPIC SANA Hotel on 16-18 September 2018. Lisbon is a lively, breathtaking city and should be an excellent venue for our conference. We look forward to your attendance at our International Conference and welcoming you as a member of the Pine Chemicals Association International.



Alex Cunningham
President



PCA VISION

The Pine Chemicals Association International is recognized as a global leader representing, supporting and advocating for the value of Pine Chemicals as bio-renewable and sustainable products. The association is a non-profit entity with members who are producers, processors, and consumers of chemicals derived from pine trees, a renewable resource.

PCA MISSION AND VALUES

The PCA is:

- Valued by the industry for its unique “user friendly” Pine Chemicals conferences and symposiums, which provide exceptional networking opportunities and current industry informational presentations.
- Considered the primary monitor of regulatory and legislative issues impacting the global Pine Chemicals industry and acts independently or in collaboration with other associations and/or groups to address critical issues.
- The global resource for developing and maintaining ASTM, ISO and PCA test standards required for Pine Chemicals international commerce.
- Recognized as an educational and informational source for Pine Chemicals industry statistics, process safety guidelines and raw material production technology.
- Known and recognized for its culture of strict adherence to the code of ethics and policies of anti-trust compliance.

ETHICAL PRINCIPLES OF THE PINE CHEMICALS ASSOCIATION

The following statement of ethical principles is established for the purpose of guiding the conduct of all PCA members and supporting the PCA's commitment to fairness in business relationships. Membership in the PCA constitutes a commitment by each member to use its best efforts:

- To support the purposes of the PCA as set forth in its Mission and Vision Statements.
- To observe the highest level of integrity when acting on behalf of the PCA, representing the best interests of the association over individual interests.
- To respect and comply with applicable local laws and regulations where such member organization operates (as well as international treaties and agreements to which the country of operation is a signatory).
- To maintain and enhance the safety and well-being of workers.
- To encourage environmental stewardship and sustainable forestry practices.
- To comply with applicable antitrust and competition laws at all PCA-related meetings and events, refraining from any discussions of competitively sensitive topics, including but not limited to, local, regional or international prices or pricing strategies.

Adopted by PCA Board of Directors, April 2016

PCA International Meetings bring together the global pine chemicals industry for a unique opportunity to address current issues, learn and network with colleagues.

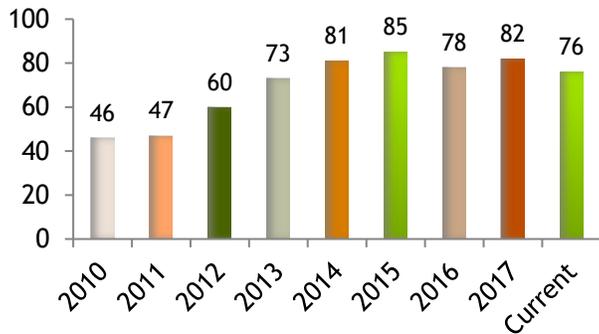


PCA International Meetings are among the largest gatherings for the pine chemicals sector, focused exclusively on developments, issues and opportunities in pine chemicals. Reflecting the global nature of the industry, the 2017 meeting was held in Montreal, Canada with over 275 attendees.

In 2018, the PCA International Conference will be held at the EPIC Sana Hotel in Lisbon, Portugal, on 18-20 September 2018.

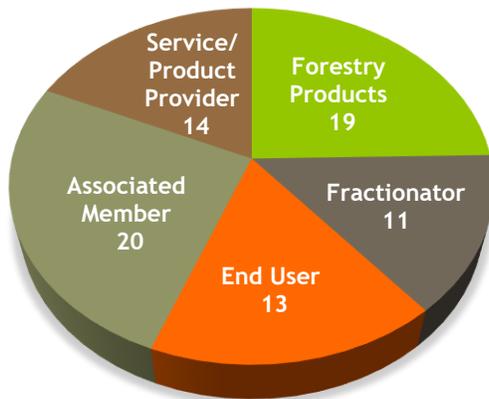
Membership

PCA membership:



The PCA represents the pine chemicals industry around the globe and provides the best opportunities for networking with organizations and individuals involved in the full life cycle of pine chemicals.

Members by Type



Membership and Information Committee

The objective of the Membership and Information Committee is to create, communicate and ensure the value proposition of PCA membership to all stakeholders. The Committee assures that members have: access to regulatory, legislative and key business developments; access to best practices; education and training for their staff; and can network effectively with colleagues.

The Committee works closely with other PCA committees to identify valuable programs, services and activities.

Currently, PCA membership is comprised of 76 paid members. The Committee established a goal of reaching 125 members within three years.

Additional goals for 2018 include:

- Ensure access to information on key legislative, regulatory, legal, scientific and other international topics.
- Develop, refine and communicate a clear value proposition of membership to its current and potential members.
- Create forums and collaborations with related associations and industry thought leaders.

Members by Region



PCA Committees offer members an opportunity to engage in issues critical to the pine chemicals industry.

Advocacy Committee: In 2017, much of the CTO focus was on the activities within the EU regarding the update to the Renewable Energy Directive. The PCA was supportive of the efforts lead by the CTO Task Force group with HARRPA. The effort was not successful to remove CTO from the legislation as a designated raw material for bio fuels, even though CTO does not fit the definitions within the regulation. However, some added amendments that allow for modification of the designation at a later date, along with consideration of market impact, currently remain in the legislation, subject to approval by the EU Parliament and the EU Council.

Other work has been focused on participation in the Roundtable on Sustainable Biomaterials (RSB). The RSB is a non-governmental organization who is drafting standards for bio-based materials that can be used by governments to certify materials. The ACC Pine Chemistry Panel was successful in obtaining membership to the group. The representative for the panel is transferring to Alex Cunningham, so he can represent not only the CTO sector, but all aspects of the Pine Chemical Industry.

While there has been minimal other activity within the PCA, there remains several opportunities for the Advocacy Committee to increase activity, particularly around the designation and certification of Pine Chemical products as bio base. With our new President in place, the evaluation by the Board and the President will continue in the coming year to determine where best to spend the resources of the PCA.

Finally, overall Sustainability is a longer-term goal of the PCA. The Pine Chemical industry is in a unique position to share the story about the use of renewable materials. The industry can ensure a long life by employing sustainable practices in all areas - from growth of the trees, to the safety of employees, to care of the environment. Establishing a path with our leadership is a goal for 2018-2019.



Recovery Committee: Focuses on educating members on recovery, processing and safe handling of by-products (co-products) from the pulp and paper industry, specifically crude sulfate turpentine, black liquor soap, and crude tall oil. The Committee accomplishes its work through papers on best practices, and offerings of short courses to educate those specializing in these areas.

In 2017 the Committee released best practice articles on the PCA website, and held an acclaimed training Course in Orlando, Fla. on Soap & Turpentine Recovery and Crude Tall Oil Processing, which was attended by 55 participants.

Plans for 2018 include the following:

- Organizing a PCA Standard Test Methods Manual for Crude Sulfate Turpentine Products similar to the PCTM's issued for Tall Oil Products in 1996.
- Publish Best Practice Articles to PCA Website.
- Proper Sampling Techniques for BLSS & CTO.
- Proper Sampling Techniques for CST.
- Various Options for Returning TOP Spent Acid to the Mill.
- Preparation for Cleaning CST Equipment/Tanks.
- Placarding & Shipping CST.
- Preparation and Organization of training course to be held in Spring of 2019.

Product Regulatory and Stewardship Committee & Advocacy Committee:

USA: Continue to be involved in implementation of the new TSCA-LSCA law as a member of the American Alliance for Innovation (AAI): PCA contributed to the Inventory Notification Rule and began joint efforts to address nomenclature issues with USEPA. We paid particular attention to industry difficulties with Pre-Manufacture Notifications (PMNs) (fees set to rise greatly) and to the new Risk Assessment rules

EUROPE: Continue to work with HARRPA on issues impacting the pine chemical industry and utilize this information in global regulatory efforts: We receive regular updates on European issues from our members of HARRPA in Europe who are also PCA committee members. We are concerned about the utilization of CLP InfoCards in Europe through which incorrect classifications are being published under ECHA auspices and thence adopted by other organizations.

CANADA: Continue to work with the Industry Coordinating Group and provide ECCC with data and support favorable to pine chemicals regulation: Pine chemical polymers were screened out in Phase 2 of the Chemicals Management Plan and the rest will receive risk assessments as part of Phase 3 to issue this year and next. PCA has provided data, information, the PCA skin sensitization monograph and we facilitated the transfer of European data to Canada. We have recommended academic reviewers and commented on new approaches to estimating hazards.

CALIFORNIA: Continue to follow actions by the State of California concerning pine chemicals: As part of a multi trade / industry group we have tried to work with the Air Resources Board to rewrite their Fragrance Exemption Guidance Document that could significantly reduce the ability of California companies to use terpene-based fragrances in consumer products. We are considering how to respond to the San Francisco Guidance for Disinfectants that classifies pine oil incorrectly as a skin sensitizer. We were stymied in our significant efforts to remove the hydrogenated rosin esters from the Candidate Chemicals list, so they are still there to warn customers away from them

GLOBAL: Support the Global Regulatory Library. Monitor global regulations for impact on pine chemicals and related materials and advocate accordingly: We also continue to monitor lists of banned substances and comment as appropriate.

COMMITTEE: Increase participation from PCA membership and from South America and Asia.



Gum Rosin Committee: During the last five years, the Gum Rosin Committee shifted its original work plan as a task group working on gum rosin specifics (physic-chemical specifications, markets, production) into an advocacy forum. This shift included annual Gum Rosin focused presentations at PCA meetings and participation in other pine chemicals events. This has helped to offer greater visibility to the issues and opportunities in this aspect of pine chemicals. The Committee's efforts were most apparent in the Oleoresin Symposium held in Lisbon in February 2016. Beyond its education functions, the symposium brought together the global players of the sector, offering a baseline of gum rosin activities and helped to organize the Committee mission and objectives. The Committee continues to refine its mission and objectives and its function to drive knowledge and innovation through its 2017 activities in Orlando and Montreal, as well as, the Oleoresin Symposium held 18-20 April 2018 in Savannah.

Testing Committee: Responsible for maintaining and updating PCA, ASTM and ISO standard test methods related to the pine chemicals industry; developing new and improved methods; and harmonizing methods when possible. Efforts this year included:

ASTM D01.34 Test Methods-is responsible for maintaining 27 standard methods. Six methods were reviewed and approved for renewal in 2017 with four to be considered in 2018. Method development focused on measurement of color in rosin in solution, as current methods apply only to solid rosin. An international round robin was carried out using various types of rosin. The results were inconclusive as the lab to lab precision was not satisfactory. The cause of this is being studied.

ISO TC35/SC10/WG5- efforts concentrated on a widely-used method for measuring softening point of resins by the Mettler cup and ball methods and comparing different methods used in the US and Europe. Final precision data is still being calculated but initial data indicates that the Mettler methods have a similar precision to the standard Ring and Ball method. A new ISO standard test method is being prepared based on this study.

PCA Test Methods- specific for the industry are under review, to be completed in 2018. The scope of the original PCA publication was broadened to include some turpentine test methods in addition to tall oil related methods.

Environmental, Health and Safety Committee: Provides PCA Member Companies with real-time information and proven strategies for opportunities to gain and sustain competitive advantages through a proven source - investment in safety, health, and environmental management systems.

The experience and knowledge among the committee members is a resource to provide tools to assist member companies in preventing adverse events. Quite simply, the EHS Committee strives to allow Member Companies to better protect their triple bottom line - people, planet, profit.

The committee works continuously to identify operational better practices and lessons learned from regularly scheduled PCA Member discussions for identifying risks, reducing those risks and advancing incident prevention programs at Member Facilities. To address this important role, in 2017-2018 the Committee:

- Oversees and administers the EHS Awards Program recognizing facilities, employees and leaders for their continuous improvement efforts.
- Creates a Best (Better) Practice Document Program, publishing information on the PCA website.
- Provides a forum for members to share knowledge related to new EHS rules and regulations at committee meetings and information exchanges.
- Provides a forum for members to improve their knowledge on a variety of topics, such as sharing lessons learned from incidents, expanding knowledge in the area of chemical process safety, and techniques to strengthen safety culture.
- Defines and collects pertinent EHS data from member companies and disseminates for comparative purposes.

Robust Safety, Health, and Environmental management is vital to pine chemical companies and the Committee is actively requesting member companies to engage with and provide personnel, as appropriate, and utilize the Committee.



2017 Environmental, Health and Safety Excellence Award Nominations

Proactive steps toward protecting the environment and employees is important to pine chemicals companies and to the identity of this sustainable, bio-based sector. The PCA promotes a safety culture among member organizations and recognizes people and facilities demonstrating excellence in safety.

The PCA safety awards recognize excellence in protecting the environment and employees

Purpose:

The purpose of the PCA awards program is to recognize and promote excellence in environmental, health, and safety among member companies. The program is designed to recognize both individual and facility efforts demonstrated to protect the environment or prevent accidents and illnesses through hazard identification and control.

Eligibility:

All PCA member companies qualify to apply for Facility Environmental, Health and Safety Excellence Awards. All employees of PCA member companies qualify to be nominated for Environmental, Health, and Safety Leadership or Employee Excellence Awards. Contracted employees or consultants do not qualify for individual awards. Contracted services contributing to facility efforts may be considered for Facility Environmental, Health and Safety Excellence Awards.

Nominations:

Nomination applications are available on the PCA website and should be submitted by 1 July 2018. Awardees will be notified in August 2018 and presentations will be made at the International Conference 16-18 September 2018 in Lisbon, Portugal.

Leadership Excellence Award

This is an individual award intended to recognize a corporate CEO or facility manager (a leader) that demonstrates excellence in leadership skills in order to advance environment, health and safety throughout their organization(s). Since this is an individual award the process involves nomination by peers within the PCA member companies or employees within their organization.

Employee Excellence Award

This is an individual award intended to recognize an employee that demonstrates excellence in order to advance environment, health or safety throughout their plant organization. Since this is an individual award the process involves nomination by peers within the PCA member companies or employees within their organization.

Facility Excellence Award

This award recognizes a plant or facility that demonstrates environmental, safety or health excellence and has implemented new prevention programs that protect the environment or identify and control workplace hazards.

2018/2019 Board of Directors & Staff

Board Chairman

Greg Adams
Category Manager
International Flavors and Fragrances
gregory.adams@iff.com

Board Vice Chairman

Hunter Harris
Director- Operations Support
Ingevity
hunter.harris@ingevity.com

Directors:

Peter Acton
President & CEO
Arboris, LLC
peter.acton@arboris-us.com

Man-Wai Chow
Product Manager, Rosins
Eastman Chemical Company

Mariana Jorge Ferreira
International Department
Socer Brasil Ind e Com LTDA
mferreira@luresaresinas.com

Lee Godina
President
Resinall Corporation
lgodina@resinall.com

Dale Hobson
VP Strategic Materials & Business
Development
Symrise
dale.hobson@symrise.com

Mikio Katayama
Director Global Business Development
Lawter, Inc.
mikio.katayama@lawter.com

Greg McLean
Director - Strategic Raw Materials
Kraton Chemical LLC
Greg.McLean@kraton.com

John Pflasterer
Director, Sourcing and Logistics
ArrMaz
jpflasterer@arrmaz.com

Corey Schneider
President
DRT America
cschneider@drtamerica.com

Steve Violette
President
Plasmine Technology
steveviolette@plasmine.com

Pine Chemicals Association International Executive Team:



Alejandro Cunningham, **President & COO**
Email: alex@pinechemicals.org
Mobile (USA): +1 904-326-9226
Mobile (Brazil): +55 (15) 9 9184-1321



Amanda Young, **Executive Director**
Email: ayoung@pinechemicals.org
Mobile: +1 904-207-2181



Wendi Kidd, **Executive Assistant**
Email: wkidd@pinechemicals.org
Mobile: +1 904-955-2455

JOIN THE PCA

The Pine Chemicals Association is a global resource to the industry and works in many ways to help and add value to your business.

The PCA is furthering its efforts to better serve the Pine Chemicals industry by becoming a more agile and responsive organization. We are providing our members with the vital information, resources, and networking essential to your success by:

- Offering expanded opportunities to train and develop the staff who are vital to your business and provide more resources essential to their work.
- Organizing opportunities to engage with the PCA to shape the environment for the pine chemicals industry and to network with your colleagues.
- Providing the latest regulatory and legislative updates and relevant industry information.
- Providing a user-friendly website that provides a forum for sharing technology, relevant documents and best practices, general market history and global industry updates so you and your staff can find the resources you need.
- Maintaining and Updating ASTM and ISO testing standards vital for your company and the global industry.

All of these activities help the businesses who participate in the pine chemicals industry. We need your support to keep these vital activities current and active, and hopefully you will consider these critical values offered by the PCA as you evaluate membership with PCA.

You will get value from membership directly, as well as through supporting the programs that help the health of the overall pine chemicals industry. All of us together have made a difference in maintaining the success of the pine chemicals commercial business and we need your support to continue these and future programs.

<u>Member Category</u>	<u>Includes (dues)</u>
Forestry Products/Processing	Forest owners; Producers of Gum Rosin, Gum Turpentine, CST, CTO (\$3,000); Oleoresin producers (\$500)
Processors (Fractionators)	Small (\$10,000); Mid-sized (\$17,000); Large (\$20,000)
End Users (Purchasers of Pine Chemicals)	Adhesives, rubber, ink, paper, pharmaceuticals, food/nutritionals, flavors & fragrance (\$5,000)
Service/Product Providers (non-voting member)	Equipment, Packaging, Distributors, Transportation, Brokers/Agents (\$3,000)
Associated Members (non-voting member)	Single person consultancy, Academic/Research organizations (\$1,000); Engineering firms, Think Tanks, Consulting firms, Venture Capital firms (\$1,500)

MEMBER COMPANY LIST

A V Pound & Co Ltd	IRELAND	Neste Engineering Solutions Oy	FINLAND
Arakawa Chemical (USA) Inc.	UNITED STATES	Nopek Oy	FINLAND
Arboris LLC	UNITED STATES	ORGKHM BCH Management Company, JSC	RUSSIA
ArrMaz	UNITED STATES	P T Milatronika Karya Niaga	INDONESIA
Brenntag Canada	CANADA	Petrofer AG	SWITZERLAND
Claremont Chemical Co LTD	ENGLAND	Pine Chemicals Recovery Assistance, Inc.	UNITED STATES
Domtar Paper	UNITED STATES	Pinova Inc.	UNITED STATES
DRT	FRANCE	Plasmine Technology Inc	UNITED STATES
Dutch Mountain Trading	NETHERLANDS	Privi Organics India Limited	INDIA
East South Inc	UNITED STATES	PT Kharisma Satya Jaya	INDONESIA
Eastman Chemical Company	UNITED STATES	Quad Graphic CR/T (Chemical Research Technology)	UNITED STATES
Euro-Yser S.A.	PORTUGAL	Resinall Corp	UNITED STATES
FGN Global Logistics Inc	UNITED STATES	RESINEVES AGROFLORESTAL LTDA	BRAZIL
Florachem Corporation	UNITED STATES	Respol/Forchem	FINLAND
FLORPINUS INDÚSTRIA QUÍMICA LTDA	BRAZIL	Rosin Plus Consulting Services, LLC	UNITED STATES
Forest Paraguay	PARAGUAY	Scion	NEW ZEALAND
G. C. Rutteman & Co. BV	NETHERLANDS	SGS	UNITED STATES
Georgia-Pacific Chemicals LLC	UNITED STATES	Socer Brasil Ind e Com LTDA	BRAZIL
Grupo AS Resinas	BRAZIL	Sociedad de Resinas Naturales, S.L.	SPAIN
Harima Chemicals Group Inc.	JAPAN	SPI Marine (Houston) Inc	UNITED STATES
Ingevity	UNITED STATES	Star Pine Chemical Co., Ltd	CHINA
International Flavors & Fragrances Inc	UNITED STATES	Sun Chemical Corporation	UNITED STATES
International Paper	UNITED STATES	SunPine AB	SWEDEN
James Russell	UNITED STATES	Sutong	UNITED STATES
Kemira Chemie GesmbH	AUSTRIA	Symrise	UNITED STATES
Klabi SA	BRAZIL	T&R Chemicals Inc	UNITED STATES
Kraton Chemical LLC	UNITED STATES	TER GROUP	GERMANY
Langley Smith & Company Limited	UNITED KINGDOM	Thoma Technologies	UNITED STATES
Lawson Consulting	UNITED STATES	United Resins- Producao de Resinas SA	PORTUGAL
Lawter Inc	UNITED STATES	University of Florida, School of Forestry Res. & Conservation	UNITED STATES
Legacy Chemical Corporation	UNITED STATES	Vistaurum Corporation	UNITED STATES
Mercer International Inc.	CANADA	Vopak Americas	UNITED STATES
Meridian Chemicals	UNITED STATES	WestRock	UNITED STATES
Mobile Rosin Oil Company Inc	UNITED STATES	Wibax Biofuels AB	SWEDEN