Société Chimique de France

Ecole d'automne 2013

Organized by the Group
« *Dégradation et comportement au feu des matériaux organiques* »
of the Société Chimique de France

« Degradation of fire-retarded polymers in environmental conditions »

24 - 26 September 2013

Mèze (34) - FRANCE

OBJECTIVES

The group "Degradation and fire behavior of organic materials " of the Chemical Society of France offers a school focused on the degradation of fire-retarded polymers in environmental condition in order to :

- give people the basic knowledge in the domains of ageing and fire-retardancy
- gather in a two days meeting two different communities with the aim of understanding the impact of environmental ageing of fire-retarded polymers on the use properties of the polymeric materials
- establish a connection between investigators in the various parts of the fields and provoke a reflexion on future collaborative programs.

The workshop will be organized on the basis of a four half-days meeting. Each session will be devoted to one or two peculiar aspects and will be introduced by general presentations followed by short presentations on recent results.
This workshop will be placed under the auspice of the MoDeSt Society.

ORGANIZING COMMITTEE AND SCIENTIFIC COMMITTEE

ACOME, C. LAGREVE
ARDI – Materials and Process, M. LEFEBVRE
Centre des matériaux/EM Alès, JM. LOPEZ-CUESTA et L. FERRY
CRP HENRI TUDOR, A. LAACHACHI
CTTM Le Mans, D. DELAVAL
ICCF/Université Blaise Pascal, JL. GARDETTE
LMOPS/Université de Lorraine, M. FERRIOL et M. COCHEZ
LNE, C. CHIVAS-JOLY
MAEDER RESEARCH, Groupe MAEDER, H. FARGE
UNIVERSITÉ DE CORSE, T. BARBONI

THUESDAY, 24 SEPTEMBER AFTERNOON

13:00 Welcome

13:30 Introduction of the school

13:40 **General Introduction :**
Improving Weathering Resistance of Flame Retarded Polymers
Rudolf PFAENDER, Fraunhofer Institute

Session I : Scientific basis of fire-retardancy of polymeric materials

14:40 **General approach of Flame Retardancy of Polymers**
Laurent FERRY, Ecole des Mines d'Alès and Marianne COCHEZ, Université de Lorraine
- Flame Retardant Mechanisms
- Various Classes of Flame Retardants
- Analytical methods

16:40 Coffee break

17:00 **Short presentations**

- Normative aspects of the reaction to fire
Carine CHIVAS-JOLY, LNE

- Positioning of tests of reaction to fire at laboratory scale compared to industry standards and testing,
Rodolphe SONNIER, Ecole des Mines d'Alès

WEDNESDAY, 25 SEPTEMBER

Session II : Scientific basis of polymer ageing

During this session the basic concepts of the polymer degradation will be presented. Focus will be given on ageing carried out in environmental conditions, which includes the action of the environmental parameters like light, temperature, oxygen, water, atmospheric pollutants…

8:30 **State of the art**
Jean-Luc GARDETTE, ICCF
- Various types of ageing
- Basis of polymer degradation and stabilisation

9:30 **Analytical methods for polymer ageing and failure**
Pierre-Olivier BUSSIERE, ICCF
- Consequences of ageing on the degradation of the functional properties of polymeric materials
- Analytical methods: from the molecular level to the macroscopic functional properties

10:30 *Coffee break*

10:50 **Short presentations**

- NOR-based Flame Retardant, Stabilizer and Versatile Synergist
Margot CLAUSS, Heinz HERBST, BASF

- Other presentations, *Name of Speaker to be confirmed*

11:50 *Lunch break*

Session III : Influence of fire-retardant on the environmental ageing of polymers

Two aspects should be investigated: at first, what are the impact of fire retardants on the photochemical ageing of polymers and what about the interactions with the classical stabilizers used to protect the polymer from ageing? Secondly, is there an impact of the degradation of the polymer on the fire retardancy properties? There is not so much literature that deals with the degradation of fire-retarded polymers exposed to environmental conditions. Both these questions will be the core of this school.

14:00 **State of the art - Recent results**
Sandrine THERIAS, ICCF

15:00 **Short presentations**
Philippe SALENIS, PINFA
Lein TANGE, ICL-IP

16:00 ***Social program***

THURSDAY, 26 SEPTEMBER 2013

Session IV : Consequences of ageing on the fire retardant properties of polymers

Introduction
Bernhard SCHARTEL, Bundesanstalt für Materialforschung und Prüfung (BAM)

9:00 **State of the art - Recent results** (literature review)
Hossein VAHABI, Université de Lorraine

10:00 **Short presentations**

- Fire performance of aged cables (*Name of Speaker to be confirmed)*

- Impact of ageing on the reaction to fire of crosslinked elastomers
Damien DELAVAL, CTTM

- Impact of ageing on the reaction to fire of reinforced polyamide 6
José-Marie LOPEZ CUESTA, C2MA

11:30 **General discussion- New research programs**

12:00 *Lunch break*

End of the workshop

Subject to change
(status as of 04/06/2013)

MEETING LOCATION :

Village Club Thalassa
Rue de la Méditerranée
34140 Mèze
Tel : 04 67 43 82 74
www.villagethalassa.com

REGISTRATION FEES :

Fees including full conference participation, autorithy for downloading presentations on the Web as well as coffee breaks, lunches and dinners and full accommodation

	Before july the first	After July 1st
Full Price	**350 €**	**400 €**
For PhD Students	**250 €**	**300 €**

REGISTRATION FORM

(dead-line: July 1st)

Name :.....First Name : .....
Position:.....
Society : .....
e-mail : .....
Address :.....
Zip Code : ..... City : .....
Phone : ..... Fax : .....
N° SIRET : .....

Please check appropriate boxes:

☐ a bank check of : ..... Euros payable to **« Association groupe comportement au feu »**

☐ order form

for ..... x inscription(s)

☐ Full price ☐ PhD Students

Registration without included payment will not be considered

Date and signature :

REGISTRATION TO RETURN TO:

Monsieur Michel FERRIOL
IUT de Moselle Est – Département Chimie - Université de Lorraine
BP 80105 - Rue Victor Demange
57503 SAINT AVOLD CEDEX (France)
Mail : michel.ferriol@univ-lorraine.fr / Tél : 03 87 93 91 02