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## Compatibility of TATB Based PBX Explosive and Rigid Polyurethane Foam

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**Abstract:** The interaction of TATB based PBX with rigid polyurethane foam (RPUF) in the linear heating-up process was investigated by TG-IR. The results show that the gas phase products released from the contact system are basically sum of the gas phase products released from the two isolated compositions and no new gas products occur. The curves of change in heat output for TATB based PBX, rigid polyurethane foam(RPUF) and their contacted system during the aging by 140 °C/10 d were obtained by a microcalorimeter. The surface structures and element contents of the samples before and after heated were characterized by IR and XPS, revealing that the surface structures and element surrounding of the samples before and after contacted do not change and TATB based PBX and polyurethane foam have good compatibility.

**Key words:** physical chemistry; polymer bonded explosives( PBX ); polyurethane foam; calorimetry; X-ray photoelectro spectrum (XPS); thermogravimetry-infrared spectrum (TG-IR); compatibility

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## 2013 国际推进剂、炸药、烟火技术秋季研讨会在蓉成功举办

2013 国际推进剂、炸药、烟火技术秋季研讨会于 9 月 24~27 日在成都成功举办。会议由中国兵工学会,北京理工大学,南京理工大学,中国工程物理研究院化工材料研究所,应用物理化学重点实验室(陕西应用物理化学研究所)、中北大学联合主办;北京理工大学火炸药研究院协办;由爆炸科学与技术国家重点实验室(北京理工大学)和西南科技大学承办。

中国工程物理研究院孙承伟院士、国际烟火学会前主席 Mr Rutger WEBB、美国 Karl Rink 教授任会议主席。孙承伟院士主持了开幕式。来自中国、美国、英国、俄罗斯、加拿大、荷兰、捷克、韩国等百余名科研工作者及学者参加了会议。会上会下参会者分别就推进剂、炸药和烟火药剂的合成、性能表征、配方原则及制备工艺,含能材料的热分析与稳定性,起爆、爆轰及其效应,感度与安全性等方面的最新研究进展进行了交流与讨论。

“国际推进剂、炸药、烟火技术秋季研讨会”已开展了 10 届,本次会议的召开将进一步促进我国相关领域的发展和繁荣,增进国内外学者之间的学术交流。

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