505183276 11/09/2018

EPAS ID: PAT5230045

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
BRETT L. VAN HORN	11/09/2018
BENJAMIN BIN CHEN	11/09/2018
PHILIPPE BONNET	11/09/2018

RECEIVING PARTY DATA

Name:	ARKEMA INC.
Street Address:	900 FIRST AVENUE
City:	KING OF PRUSSIA
State/Country:	PENNSYLVANIA
Postal Code:	19406

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15659663

CORRESPONDENCE DATA

Fax Number: (610)205-7597

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

610-205-7545 Phone:

Email: elizabeth.gilson@arkema.com

Correspondent Name: LIZ GILSON Address Line 1: ARKEMA INC.

Address Line 2: 900 FIRST AVENUE

Address Line 4: KING OF PRUSSIA, PENNSYLVANIA 19406

ATTORNEY DOCKET NUMBER: IR3898A CIP2 NAME OF SUBMITTER: LIZ GILSON SIGNATURE: /liz gilson/ **DATE SIGNED:** 11/09/2018

Total Attachments: 2

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PATENT REEL: 047459 FRAME: 0829 505183276

ASSIGNMENT OF INVENTION AND LETTERS PATENT

WHEREAS, we, Brett L. Van Horn, Benjamin Bin Chen, and Philippe Bonnet, hereinafter referred to as Assignors have invented certain new and useful improvements in BLOWING AGENT COMPOSITIONS OF CARBON DIOXIDE AND HYDROCHLOROFLUOROOLEFINS, and for which an APPLICATION USSN 15/659,663 filed 07/26/2017 for Letters Patent of the United States has been duly executed by each of us on even date herewith.

AND WHEREAS, Arkema Inc., a corporation organized under the laws of the Commonwealth of Pennsylvania, and having a place of business at **900 First Avenue, King of Prussia, Pennsylvania 19406**, hereinafter called the assignee, is desirous of acquiring the entire right, title and interest in and to said invention within the United States of America and its territorial possessions and all foreign countries and any United States and foreign Letters Patent that may be granted therefore.

NOW, THIS INDENTURE WITNESSETH, that for good and valuable consideration, the receipt of which is hereby acknowledged, and with the intention of being legally bound hereby, we have assigned and transferred, and do hereby assign and transfer to the said assignee the entire right, title and interest in and to the said invention within the United States of America and its territorial possessions and all foreign countries and in and to any Letters Patent of the United States and foreign countries and all divisions, reissues, continuations, continuations-in-part, and extensions thereof that may be granted therefore and the right to apply for Letters Patent in foreign countries with full benefit of such priorities as may now or hereafter be granted to us by local laws or by treaty, including any international convention for the protection of industrial property, together with the right to extend the protection of said United States Letters Patent to the various territorial possessions now owned or which may be hereafter acquired by the United States of America, all said rights to be held and enjoyed by the assignee for its own use and behalf, and for the use and behalf of its successors or assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by us if this assignment and sale had not been made. And we do hereby request and authorize the Commissioner of Patents, U.S.A., to issue said Letters Patent when granted, in accordance with this assignment.

We further covenant and agree with the assignee that we have a full and

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unencumbered title to the invention herein assigned, which title we warrant unto the assignee, and we further agree that we will, without demanding any further consideration therefore, at the request but at the expense of the assignee, do all lawful and just acts, including the execution and acknowledgment of instruments, that may be or become necessary for obtaining, sustaining or reissuing United States or foreign Letters Patent for the said invention, and for maintaining and perfecting the assignee's right to said invention and Letters Patent, particularly in cases of interference and litigation.

IN TESTIMONY WHEREOF, we have hereunto set our hand on the dates indicated below.

Brett L. Van Horn

November 9, 2018

Benjamin Bin Chen

November 9, 2018

Philippe Bonnet

November 9, 2018