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SUBMISSION TYPE	SION TYPE: NEV		NEW ASSIGNMENT			
NATURE OF CONVEYANCE:			ASSIGNMENT			
CONVEYING PART	Υ DATA					
Name				Execution Date		
Scott R. Culler				12/17/2008		
Dwight D. Erickson		12/17/2008				
Negus B. Adefris		12/17/2008				
John T. Boden		12/17/2008				
John D. Haas				12/17/2008		
RECEIVING PARTY	′ DATA					
Name:	3M Innovative Properties Company					
Street Address:	P.O. Box 334	P.O. Box 33427				
City:	St. Paul					
State/Country:	MINNESOTA					
Postal Code:	55133-3427	55133-3427				
Property Type		Number				
Application Numbe	r:	12337	001			
CORRESPONDENC	CE DATA					
Fax Number: (651)736-3833						
Correspondence will be sent via US Mail when the fax attempt is unsuccessful.						
Phone: 651-733-1500						
Email:	LegalUSDocketing@mmm.com pondent Name: 3M INNOVATIVE PROPERTIES COMPANY					
Correspondent Name: 3M INNOVATIVE PROPERTIES COMPANY Address Line 1: PO BOX 33427						
ddress Line 4: ST. PAUL, MINNESOTA 55133-3427						
ATTORNEY DOCKET NUMBER:		63512US002				
NAME OF SUBMITTER:		Jenny Thompson				
			1			
				PATENT		

Total Attachments: 4

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ASSIGNMENT OF APPLICATION

Whereas I/we, the below named inventor(s), with residence and citizenship as indicated below, have made an invention in

METHOD OF MAKING ABRASIVE SHARDS, SHAPED ABRASIVE PARTICLES WITH AN OPENING, OR DISH-SHAPED ABRASIVE PARTICLES

S for which an application for a United States Patent is being filed contemporaneously herewith;

for which an application for a United States Patent identified as U.S. Patent Application No.; was filed on;

which application is identified as PCT International Patent Application No. ; filed ;

Now, therefore, for good and valuable consideration, receipt of which is acknowledged, I/we have agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly-owned subsidiary of 3M COMPANY, and a corporation of Delaware, having its principal office at Saint Paul, Minnesota, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any division or continuation (in whole or in part) of said application, and in and to any and all improvements in the said invention made by me or made jointly with others (provided any such improvement is made during, or within one year after the termination of, my employment with 3M COMPANY and any of its existing or future subsidiaries), and in and to any and all Letters Patent, reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto (including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon the said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by me/us had this assignment and transfer not been made;

I/We do further agree for myself/ourselves and for my/our heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as I/we lawfully may, that may be deemed necessary by said Company, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid and to obtain or maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries; and

Assignment

Page 1 of 4 3M Innovative Properties Company, P.O. Box 33427, St. Paul, Minnesola 55133-3427 I/We do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to said 3M Innovative Properties Company, as the assignee of the entire right, title, and interest therein.

In witness whereof, I/we have signed my/our name(s) on the day and year set forth below.

Given Name (first and middle [if any]):	Equily Manage av Country					
SCOTT R.	Family Name or Surname:					
Inventor's Signature: // //						
Ant K. Culle	Date: /2/17/208					
Residence:	Country:	Citizenship:				
Burnsville, Minnesota	USA	United States of America				
STATE OF MINNESOTA)		······································				
) ss.						
COUNTY OF RAMSEY)						
On this day of						
above-named SCOTT R. CULLER, and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid.						
JENNYM THOMPSON		A.,				
(Seal)) As we notary Public (Notary Public	Starrapan				
Minnesota My Commission Expires January 31, 2011	Nótary Public	7				
Monthantlandlandlandlandlandlandlandlandlandland						
Given Name (first and middle [if anv]):	Family Name or Surnam	A,				
Given Name (first and middle [if any]):	Family Name or Surnam ERICKSON	e:				
DWIGHT D	ERICKSON	e:				
	ERICKSON Date:	e:				
DWIGHT D.	ERICKSON Date: 12/17/2008					
DWIGHT D	ERICKSON Date: 12/17/2008 Country:	Citizenship:				
DWIGHT D.	ERICKSON Date: 12/17/2008					
DWIGHT D.	ERICKSON Date: 12/17/2008 Country:	Citizenship:				
DWIGHT D.	ERICKSON Date: 12/17/2008 Country:	Citizenship:				
DWIGHT D. Inventor's Signature Residence: Oakdale, Minnesota STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY	ERICKSON Date: 12/17/2008 Country: USA	Citizenship: United States of America				
DWIGHT D.	ERICKSON Date: 12/11/2008 Country: USA	Citizenship: United States of America				
DWIGHT D. Inventor's Signature Residence: Oakdale, Minnesota STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY	ERICKSON Date: 12/11/2008 Country: USA	Citizenship: United States of America				
DWIGHT D. Inventor's Signature Residence: Oakdale, Minnesota STATE OF MINNESOTA) SS. COUNTY OF RAMSEY) On this // day of) <u>ECEMPER</u> above-named DWIGHT D. ERICKSON, and who executed and deed, on the day and year aforesaid.	ERICKSON Date: 12/1/2008 Country: USA 	Citizenship: United States of America the personally appeared the t, as said person's free act				
DWIGHT D. Inventor's Signature Residence: Oakdale, Minnesota STATE OF MINNESOTA) SS. COUNTY OF RAMSEY) On this day of <i>E <u>C C M AE C</u></i> above-named DWIGHT D. ERICKSON, and who exect and deed, on the day and year aforesaid. (Seal)	ERICKSON Date: 12/1/2008 Country: USA 	Citizenship: United States of America the personally appeared the t, as said person's free act				
DWIGHT D. Inventor's Signature Residence: Oakdale, Minnesota STATE OF MINNESOTA) SS. COUNTY OF RAMSEY) On this // day of) <u>ECEMPER</u> above-named DWIGHT D. ERICKSON, and who executed and deed, on the day and year aforesaid.	ERICKSON Date: 12/11/2008 Country: USA	Citizenship: United States of America the personally appeared the t, as said person's free act				

Page 2 of 4 3M Innovative Properties Company, P.O. Box 33427, St. Paul, Minnesota 55133-3427 Case No.: 63512US002

PATENT REEL: 021994 FRAME: 0274

Given Name (first and middle [if any]): NEGUS B.	Family Name or Surname: ADEFRIS				
Inventor's Signature:	Date: 12/17 / 2008				
Residence: Woodbury, Minnesota	Country: USA	Citizenship: United States of America			
STATE OF MINNESOTA) SS. COUNTY OF RAMSEY) On this <u>/7</u> day of <u>DECEMPBEE</u> , <u>Accel</u> , before me personally appeared the above-named NEGUS B. ADEFRIS, and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid. (Seal) <u>JENNY M. THOMPSON</u> Notary Public Minnesote My Commission Express January 31, 2011					
Given Name (first and middle [if any]):	Family Name or Surna	me			
JOHN T.	BODEN				
Inventor's Signature:	Date: / 2. / 1.7 /	108			
Residerice: White Bear Lake, Minnesota	Country: USA	Citizenship: United States of America			
STATE OF MINNESOTA) SS. COUNTY OF RAMSEY On this <u>1</u> day of <u>DERCIMBER</u> above-named JOHN T. BODEN, and who executed the foregoing instrument, as said person's free act and deed, on the day and year aforesaid. (Seal) Notary Public Notary Public Minnesota Notary Public					

Given Name (first and middle [if any]): JOHN D.	Family Name or HAAS	Family Name or Surname: HAAS	
Inventor's Signature:	Date: /2//	7/2008	
Residence: Roseville, Minnesota	Country: USA	Citizenship: United States of America	
STATE OF MINNESOTA)) ss. COUNTY OF RAMSEY) On this <u>/7</u> day of <u><i>DECEMD</i></u> above-named JOHN D. HAAS, and who exec on the day and year aforesaid.	cuted the foregoing instrument.	before me personally appeared the , as said person's free act and deed,	
(Seal) JENNY W THOMPSON Notary Poblic Minnesote Ny Commission Eastern January 31, 2011	Notary Public	2. <u>Shorepe</u>	

Assignment

Page 4 of 4 3M Innovative Properties Company, P.O. Box 33427, St. Paul, Minnesola 55133-3427

RECORDED: 12/17/2008

PATENT REEL: 021994 FRAME: 0276