EXHIBIT C

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

THE DOW CHEMICAL COMPANY, Plaintiff, v. NOVA CHEMICALS CORPORATION (CANADA) and NOVA CHEMICALS INC. (DELAWARE), Defendants.	)	C.A. No. 05-737 (JJF)

DOW'S RESPONSES TO NOVA'S INTERROGATORIES NOS. 1-6

Pursuant to Rules 33 and 26(e) of the Federal Rules of Civil Procedure, and the applicable Local Civil Rules, Plaintiff The Dow Chemical Company ("Dow") hereby answers the following interrogatories of Defendants Nova Chemicals Corporation, and Nova Chemicals Inc. ("Nova") as follows.

PRELIMINARY STATEMENT AND GENERAL OBJECTIONS

Dow makes the following general objections and responses to Nova's First Set of Interrogatories. To the extent applicable, the specific objection or response to each interrogatory incorporates each general objection and response. Without regard to objections made in these General Objections, Dow reserves the right to make any appropriate objections at any hearing or trial of this matter.

1. Dow has not completed its investigation, discovery, analysis or relating to this action and has not completed its preparation for trial. As discovery proceeds, facts, information, evidence, documents and things may be discovered that are not set forth in these responses, but which may have been responsive to the interrogatories. Dow reserves the right to

is not an admission by Dow of the relevancy thereof, and is subject to this objection, and further does not constitute a waiver of this objection.

Subject to and without waiving the above General Objections, which are incorporated into each of the following responses, Dow responds to each interrogatory as follows:

RESPONSES TO INTERROGATORIES

INTERROGATORY NO. 1.

State all bases for Dow's contentions of infringement against Nova by identifying each accused product alleged by Dow to infringe the patents-in-suit and an element-by-element recitation of how each accused product incorporates the elements of each allegedly infringed claim.

RESPONSE TO INTERROGATORY NO. 1

Dow fully incorporates its General Objections. Dow further objects to this interrogatory to the extent it is overly broad, unduly burdensome, and inclusive of irrelevant subject matter or subject matter otherwise not reasonably calculated to lead to the discovery of admissible evidence, and to the extent it seeks material protected under the attorney-client privilege and/or it constitutes attorney work product or other applicable privileges or restrictions on discovery.

Dow further objects to this interrogatory to the extent it seeks expert discovery before the time provided for such discovery. Dow also objects to this interrogatory to the extent it seeks discovery regarding Dow's contentions before Dow has had an opportunity to take substantial discovery in this case. *Nestle Foods Corp. v. Aetna Cas. & Surety Co.*, 135 F.R.D. 101, 110-11 (D.N.J. 1990); *In re Convergent Tech. Sec. Lit.*, 108 F.R.D. 328, 336 (N.D. Cal. 1985). Subject to and without waiving the foregoing objections, Dow responds as follows.

On information and belief, Nova's SURPASS products are exemplified in at least Nova's U.S. Patent No. 6,984,695 ("the '695 Patent"). Further, Nova's product materials describing SURPASS products provide additional evidence that SURPASS includes each claimed element in at least claim 6 of the '053 patent and claim 1 of the '023 patent. The following infringement chart provides a summary of at least one basis that SURPASS infringes claim 6 of the '053 patent and claim 1 of the '023 patent:

U.S. PATENT NO. 5,847,053

Claim 6	**NOVA's Accused Products**
6. An ethylene polymer composition comprising	Nova's accused SURPASS products have an ethylene polymer composition. For example, the '695 patent abstract describes an "ethylene polymer." (*see* '695 patent, abstract). Nova's SURPASS Product Data Sheets and SURPASS film resins Processing Guide state that SURPASS is an ethylene polymer.

Claim 6	**NOVA's Accused Products**
(A) from about 10 percent (by weight of the total composition) to about 95 percent (by weight of the total composition) of at least one homogeneously branched linear ethylene/α-olefin interpolymer having:	The composition of Nova's accused SURPASS products comprises from about 10 percent (by weight of the total composition) to about 95 percent (by weight of the total composition) of at least one homogeneously branched linear ethylene/α-olefin interpolymer. For example, the '695 patent describes a blend of heterogeneously branched and homogeneously branched polymers. Specifically, the '695 patent reports Product 1 as having "91.5 weight % of the composition eluted at the lower temperatures expected for homogeneous copolymers." ('695 patent, col. 14:54-57). Metallocene or single-site catalysts are used for making linear ethylene polymers. Nova, in U.S. Patent No. 6,277,931, explains that "single-site" catalysts, including metallocene catalysts, are used to prepare polyethylene having a "narrow molecular weight distribution and uniform composition distribution…" ('931 patent, col. 1:1-20). The '695 patent explains that such a "homogenous catalyst" was used to make the polymers described therein "having a narrow molecular weight distribution and a narrow composition distribution." ('695 patent, col. 3:14-19; 13:23-30). And the '695 patent explains that the heterogenized fraction of the disclosed polymers are present in only about 5 to 10% by weight of the overall composition. (*Id.* at Table B.2). Further, the '695 patent describes the use of α-olefins, including octene (*see e.g.*, '695 patent, col. 9:54-59), which was used in making the polymers as reported in Table B.1. ('695 patent, col. 13:43-48, col. 16 at Table B.1).

Claim 6	**NOVA's Accused Products**
(i) a density from about 0.89 grams/cubic centimeter (g/cm^3) to about 0.935 g/cm^3,	The above identified homogeneously branched linear ethylene/α-olefin interpolymer in Nova's accused SURPASS products have a density from about 0.89 grams/cubic centimeter (g/cm^3) to about 0.935 g/cm^3. The '695 patent reports an overall density for its Products 1, 4, and 6 as "0.917, 0.918, and 0.917" respectively. ('695 patent, Tables B.1 and B.2). These Products include both a homogeneous component and a heterogeneous component. The homogeneous polymer is of lower density than the heterogeneous component. ('695 Patent, Table B.2; col. 14:54-57 (Product 1 -- "91.5 weight %" composition of the homogeneous component)). The '695 patent recites at least one homogeneous polymer that has "a density from 0.880 to 0.945 grams per cubic centimeter as measured by ASTM D792" for the homogeneous component. ('695 Patent, col. 3:34-36). The data in Tables B.1 and B.2 indicate the density of a homogeneous polymer in SURPASS would be between about 0.90 and 0.92 g/cm^3. Thus, on information and belief, the above-identified homogeneous polymer of the compositions reported in the '695 patent fall within a density from about 0.89 grams/cubic centimeter (g/cm^3) to about 0.935 g/cm^3.
(ii) a molecular weight distribution (M_w/M_n) from about 1.8 to about 2.8,	The above-identified homogeneously branched linear ethylene/α-olefin interpolymer in Nova's accused SURPASS products have a molecular weight distribution (M_w/M_n) from about 1.8 to about 2.8 For example, the '695 patent describes its "first polymer fraction" as "having a molecular weight distribution, Mw/Mn, of less then three." ('695 patent, col. 3:34-44). Further, given the nature of the catalysts identified by Nova in '695 patent that are used in the reactions, on information and belief, the Mw/Mn of the homogeneous branched polymer will be less than about 2.8; given the statement "it is believed that the short residence time of the inventive polymerization leads to small temperature, catalyst and/or monomer concentration gradients," on information and belief, the Mw/Mn of the homogeneously branched polymer will be greater than about 1.8.

Claim 6	**NOVA's Accused Products**
(iii) a melt index (I_2) from about 0.001 grams/10 minutes (g/10 min) to about 10 g/10 min,	The above-identified homogeneously branched linear ethylene/α-olefin interpolymer in Nova's accused SURPASS products have a melt index (I_2) from about 0.001 grams/10 minutes (g/10 min) to about 10 g/10 min. The '695 patent reports that the melt index for the overall composition of Products 1, 4 and 6 were 1.2, 1.1, and 1.2 grams/10 minutes (g/10 min) respectively and the Mw values of the overall composition are 93.3, 91.7 and 91.6 x 10^3 for examples 1, 4 and 6, respectively, whereas the heterogenized fraction of each of those examples has a Mw of 130.4, 185.1 and 165.2 x 10^3 respectively. Further, the '695 patent states that the heterogenized fraction is the high Mw component of the composition. ('695 patent, Table B.1 and 2). Therefore, on information and belief, a homogeneously branched polymer in SURPASS will have a melt index above the melt index of the overall composition, but will fall within the claimed range.
(iv) no high density fraction,	The above-identified homogeneously branched linear ethylene/α-olefin interpolymer in Nova's accused SURPASS products have no high density fraction. The '695 patent states that the high density fraction is the heterogenized fraction.
(v) a single melting peak as measured using differential scanning calorimetry, and	The above-identified homogeneously branched linear ethylene/α-olefin interpolymer in Nova's accused SURPASS products have, on information and belief, a single melting peak as measured using differential scanning calorimetry. On information and belief, the homogeneous polymers described in the '695 patent, having been made by a metallocene or single-site type catalyst under the process conditions specified, will have a single melting peak in the homogeneous fraction. Furthermore, the '695 patent explains in the detailed description of its preferred embodiments that the homogeneous catalyst system defined by Elston '922 can be used. ('695 patent, col. 4:27-34). The '695 patent further explains that the homogeneous polymers in Elston "have a distinct melting point due to the uniform polymer architecture." ('695 patent, col. 1:42-47).

Claim 6	**NOVA's Accused Products**
(vi) a slope of strain hardening coefficient greater than or equal to 1.3; and	The above-identified homogeneously branched linear ethylene/α-olefin interpolymer in Nova's accused SURPASS products have on information and belief a slope of strain hardening coefficient greater than or equal to 1.3. The data in table B.1 and B.2 imply that the homogeneous polymer identified above will have a density of about 0.90 to 0.92. ('695 patent, Table B.1 and B.2). While not all polymers will have a slope of strain hardening coefficient of at least 1.3, the balance of the properties of SURPASS -- including tear strength, impact strength and toughness -- indicated in Nova's marketing materials are the same properties disclosed by the patents-in-suit as those surprisingly obtained by the polymers of the claimed invention. These facts imply that the homogeneously branched component of SURPASS polymers are the type that would fall on Figure 1 included in the patents-in-suit, which illustrate that for polymers of this type that also have a density in the range of about 0.90 to 0.92, such polymers will have SHC values exceeding 1.3.
(B) from about 5 percent (by weight of the total composition) to about 90 percent (by weight of the total composition) of at least one heterogeneously branched linear ethylene polymer	The composition of Nova's accused SURPASS products comprises from about 5 percent (by weight of the total composition) to about 90 percent (by weight of the total composition) of at least one heterogeneously branched linear ethylene polymer. The '695 patent reports that Products 1, 4 and 6 include heterogenized fractions having weight percents of 8.5, 5.3 and 5.9 respectively. ('695 Patent, Table B.2 and col. 15:1-9.) The '695 patent explains that its polymers are made using "temperature, catalyst and/or monomer concentration gradients which cause the formation of the high molecular weight/high density polymer component" ('695 patent, col. 13:18-22), which the patent defines as a "heterogenized fraction." ('695 patent, col. 15:1-9). The component of the SURPASS polymers containing the heterogenized portion is therefore a heterogeneously branched linear ethylene polymer.

Claim 6	**NOVA's Accused Products**
having a density from about 0.93 g/cm^3 to about 0.965 g/cm^3	The above-identified heterogeneously branched linear ethylene polymer in Nova's accused SURPASS products have a density from about 0.93 g/cm^3 to about 0.965 g/cm^3 The '695 patent discloses heterogenized fractions, which have high density and high molecular weight. The heterogenized fractions of the overall polymer products are the "high density component" of the overall polymer composition ('695 patent, col. 15:1-9) and have a "higher density" than the remainder of the overall polymer composition. ('695 patent, col. 11:31-34). In fact, examples in the patent show short chain branching (SCB) values for the heterogenized fractions of Products 1, 4, and 6 of 3.9, 3.1 and 2.8 (per 1000 carbon atoms) respectively, which correspond to a density of greater than about 0.93. (*see* '695 patent, Tables B.1 and B.2) In contrast, the overall compositions for these products have SCB values of 15.0, 15.1 and 14.9 respectively. ('695 patent, Tables B.1 and B.2) Thus, the overall composition contains a low density component. The overall density, reported for Products 1, 4, and 6 as "0.917, 0.918, and 0.917" respectively ('695 patent, Tables B.1 and B.2), would be lower than the density of the heterogenized fraction. Thus, on information and belief, the above-identified heterogeneously branched linear ethylene polymer falls within a density from about 0.93 g/cm^3 to about 0.965 g/cm^3.

U.S. PATENT NO. 6,111,023

Claim 1	**Accused Products**
1. An ethylene polymer composition comprising	Nova's accused SURPASS products include an ethylene polymer composition. For example, the '695 patent abstract describes an "ethylene polymer." (*see* '695 patent, abstract). Nova's SURPASS Product Data Sheets and SURPASS film resins Processing Guide state that SURPASS is an ethylene polymer.

Claim 1	**Accused Products**
(A) from about 10 percent (by weight of the total composition) to about 95 percent (by weight of the total composition) of at least one ethylene interpolymer having:	The composition of Nova's accused SURPASS products have from about 10 percent (by weight of the total composition) to about 95 percent (by weight of the total composition) of at least one ethylene interpolymer. For example, the '695 patent describes a blend of heterogeneously branched and homogeneously branched polymers. Specifically, the '695 patent reports Product 1 as having "91.5 weight % of the composition eluted at the lower temperatures expected for homogeneous copolymers." ('695 patent, col. 14:54-57). Metallocene or single-site catalysts are used for making linear ethylene polymers. Nova, in U.S. Patent No. 6,277,931, explains that "single-site" catalysts, including metallocene catalysts, are used to prepare polyethylene having a "narrow molecular weight distribution and uniform composition distribution…" ('931 patent, 1:1-20). The '695 patent explains that such a "homogenous catalyst" was used to make the polymers described therein "having a narrow molecular weight distribution and a narrow composition distribution." ('695 patent, col. 3:14-19; 13:23-30). And the '695 patent explains that the heterogenized fraction of the disclosed polymers are present in only about 5 to 10% by weight of the overall composition. (*Id.* at Table B.2). Further, the '695 patent describes the use of α-olefins, including octene (*see e.g.* '695 patent, col. 9:54-59), which was used in making the polymers as reported in Table B.1. ('695 patent, col. 13:43-48, and col. 16 at Table B.1).

Claim 1	**Accused Products**
(i) a density from about 0.89 grams/cubic centimeter (g/cm^3) to about 0.935 g/ cm^3	The above identified ethylene interpolymer in Nova's accused SURPASS products have a density from about 0.89 grams/cubic centimeter (g/cm^3) to about 0.935 g/cm^3. The '695 patent reports an overall density for its Products 1, 4, and 6 as "0.917, 0.918, and 0.917" respectively. ('695 patent, Tables B.1 and B.2). These Products include both a homogeneous component and a heterogeneous component. The homogeneous polymer is of lower density than the heterogeneous component. ('695 Patent, Table B.2; col. 14:54-57 (Product 1 -- "91.5 weight %" composition of the homogeneous component)). The '695 patent recites at least one homogeneous polymer that has "a density from 0.880 to 0.945 grams per cubic centimeter as measured by ASTM D792" for the homogeneous component. ('695 Patent, col. 3:34-36). The data in Tables B.1 and B.2 indicate the density of a homogeneous polymer in SURPASS would be between about 0.90 and 0.92 g/cm^3. Thus, on information and belief, the above-identified homogeneous polymer of the compositions reported in the '695 patent fall within a density from about 0.89 grams/cubic centimeter (g/cm^3) to about 0.935 g/cm^3.
(ii) a melt index (I_2) from about 0.001 grams/10 minutes (g/10 min.) to about 10 g/10 min.,	The above-identified ethylene interpolymer in Nova's accused SURPASS products have a melt index (I_2) from about 0.001 grams/10 minutes (g/10 min) to about 10 g/10 min. The '695 patent reports that the melt index for the overall composition of Products 1, 4 and 6 were 1.2, 1.1, and 1.2 grams/10 minutes (g/10 min) respectively and the Mw values of the overall composition are 93.3, 91.7 and 91.6 x 10^3 for examples 1, 4 and 6, respectively, whereas the heterogenized fraction of each of those examples has a Mw of 130.4, 185.1 and 165.2 x 10^3 respectively. Further, the '695 patent states that the heterogenized fraction is the high Mw component of the composition. ('695 patent, Table B.1 and B.2). Therefore, on information and belief, the homogeneously branched polymer in SURPASS will have a melt index above the melt index of the overall composition, but will fall within the claimed range.

Claim 1	**Accused Products**
(iii) a slope of strain hardening coefficient greater than or equal to 1.3, and	The above-identified ethylene interpolymer in Nova's accused SURPASS products have on information and belief a slope of strain hardening coefficient greater than or equal to 1.3. The data in table B.1 and B.2 imply that the homogeneous polymer identified above will have a density of about 0.90 to 0.92. (See '695 patent, Table B.1 and B.2). While not all polymers will have a slope of strain hardening coefficient of at least 1.3, the balance of the properties of SURPASS -- including tear strength, impact strength and toughness -- indicated in Nova's marketing materials are the same properties disclosed by the patents-in-suit as those surprisingly obtained by the polymers of the claimed invention. These facts imply that the homogeneously branched component of SURPASS polymers are the type that would fall on Figure 1 included in the patents-in-suit, which illustrate that for polymers of this type that also have a density in the range of about 0.90 to 0.92, such polymers will have SHC values exceeding 1.3.
(iv) a Composition Distribution Branch Index (CDBI) greater than 50 percent; and	On information and belief, the above-identified ethylene interpolymer in Nova's accused SURPASS products have a Composition Distribution Branch Index (CDBI) greater than 50 percent. CDBI is a measure of the homogeneity of the branching.
(B) from about 5 percent (by weight of the total composition) to about 90 percent (by weight of the total composition) of at least one ethylene polymer	The ethylene polymer composition included in Nova's accused SURPASS products have from about 5 percent (by weight of the total composition) to about 90 percent (by weight of the total composition) of at least one ethylene polymer. The '695 patent reports that Products 1, 4 and 6 include an ethylene polymer having weight percents of 8.5, 5.3 and 5.9 respectively. ('695 Patent, Table B.2 and col. 15:1-9). The component of the SURPASS polymers containing the heterogenized portion is therefore a heterogeneously branched linear ethylene polymer.

Claim 1	**Accused Products**
characterized as having a density from about 0.93 g/ cm^3 to about 0.965 g/ cm^3	One or more ethylene polymer(s) in Nova's accused SURPASS products has/have a density from about 0.93 g/ cm^3 to about 0.965 g/ cm^3. The '695 patent discloses heterogenized fractions, which have high density and high molecular weight. The heterogenized fractions of the overall polymer products are the "high density component" of the overall polymer composition ('695 patent, col. 15:1-9) and have a "higher density" than the remainder of the overall polymer composition. ('695 patent, col. 11:31-34). In fact, examples in the patent show short chain branching (SCB) values for the heterogenized fractions of Products 1, 4, and 6 of 3.9, 3.1 and 2.8 (per 1000 carbon atoms) respectively, which correspond to a density of greater than about 0.93. (*see* '695 patent, Table B.2). In contrast, the overall compositions for these products have SCB values of 15.0, 15.1 and 14.9 respectively. ('695 patent, Table B.2). Thus, the overall composition contains a low density component. The overall density, reported for Products 1, 4, and 6 as "0.917, 0.918, and 0.917" respectively ('695 patent, Tables B.1 and B.2), would be lower than the density of the heterogenized fraction. Thus, on information and belief, the above-identified ethylene polymer falls within a density from about 0.93 g/cm^3 to about 0.965 g/cm^3.

Claim 1	Accused Products
and comprising a linear polymer fraction, as determined using a temperature rising elution fractionation (TREF) technique.	On information and belief, one or more ethylene polymer(s) in Nova's accused SURPASS products comprise a linear polymer fraction, as determined using a temperature rising elution fractionation (TREF) technique. The heterogenized component is the high density component and has few short chain braches. ('695 patent, Table B.2 showing SCB/1000 of 3.9, 3.1 and 2.8, respectively for products 1, 4 and 6). In addition, the '695 patent states the belief that the heterogenized component is formed as a result of small temperature, catalyst and/or monomer concentration gradients. ('695 patent, col. 13:19-22). Consequently, on information and belief, the above-identified ethylene polymer will therefore contain a linear component.

INTERROGATORY NO. 2.

Identify and fully describe each test or analysis performed by or for Dow on any Nova SURPASS polyethylene product, including all persons involved in the test or analysis performed and/or to whom the results were sent.

RESPONSE TO INTERROGATORY NO. 2

Dow fully incorporates its General Objections. Dow further objects to Interrogatory No. 2 to the extent it is overly broad, unduly burdensome, and inclusive of irrelevant subject matter or subject matter otherwise not reasonably calculated to lead to the discovery of admissible evidence, and to the extent it seeks material protected under the attorney-client privilege and/or it constitutes attorney work product or other applicable privileges or restrictions on discovery. Dow will not produce any information that is privileged. Dow further objects to Interrogatory No. 2 to the extent it seeks expert discovery before the time provided for such discovery. Subject to and without waiving the foregoing objections, Dow responds as follows: