

**Northrop Grumman Corporation
SYNOPTICS**

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REACH CERTIFICATE OF COMPLIANCE

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P/N: All NGC SYNOPTICS Products Produced

This letter is to assure that the above-mentioned product(s) made from the above-mentioned company **do not** contain any of the REACH Substances of Very High Concern (SVHC), as specified in the table below according to the Candidate list published by ECHA (European Chemical Agency).

Chemical Name	CAS Number	Inclusion Date (Y-M-D)
Perfluorobutane sulfonic acid (PFBS) and its salts	-	1/16/2020
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	1/16/2020
2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	1/16/2020
Diisohexyl phthalate	71850-09-4	1/16/2020
2-methoxyethyl acetate	110-49-6	7/16/2019
Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	-	7/16/2019
2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	-	7/16/2019
4-tert-butylphenol	98-54-4	7/16/2019
1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one (3-benzylidene camphor; 3-BC)	15087-24-8	1/15/2019
2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	1/15/2019
Benzo[k]fluoranthene	207-08-9	1/15/2019
Fluoranthene	206-44-0; 93951-69-0	1/15/2019
Phenanthrene	85-01-8	1/15/2019

Pyrene	129-00-0; 1718-52-1	1/15/2019
Benzo[ghi]perylene	191-24-2	6/27/2018
Decamethylcyclopentasiloxane (D5)	541-02-6	6/27/2018
Disodium octaborate	12008-41-2	6/27/2018
Dodecamethylcyclohexasiloxane(D6)	540-97-6	6/27/2018
Ethylenediamine	107-15-3	6/27/2018
Lead	7439-92-1	6/27/2018
Octamethylcyclotetrasiloxane(D4)	556-67-2	6/27/2018
Terphenyl, hydrogenated	61788-32-7	6/27/2018
Dicyclohexyl phthalate (DCHP)	84-61-7	6/27/2018
benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride)(TMA)	552-30-7	6/27/2018
Benz[a]anthracene	56-55-3, 1718-53-2	1/15/2018
Cadmium carbonate	513-78-0	1/15/2018
Cadmium hydroxide	21041-95-2	1/15/2018
Cadmium nitrate	10022-68-1, 10325-94-7	1/15/2018
Chrysene	218-01-9, 1719-03-5	1/15/2018
Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™)	-	1/15/2018
Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP)	-	1/15/2018
Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	-	7/7/2017
4,4'-isopropylidenediphenol (bisphenol A)	80-05-7	1/12/2017
nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2	1/12/2017
4-heptylphenol, branched and linear (4-HPbl)	-	1/12/2017
p-(1,1-dimethylpropyl)phenol (PTAP)	80-46-6	1/12/2017
Benzo[def]chrysene	50-32-8	6/20/2016
Nitrobenzene	98-95-3	12/17/2015
2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	12/17/2015
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	12/17/2015
1,3-propanesultone	1120-71-4	12/17/2015
Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1, 21049-39-8, 4149-60-4	12/17/2015
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	68515-51-5, 68648-93-1	6/15/2015
5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the		6/15/2015

individual stereoisomers of [1] and [2] or any combination thereof]		
Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7	2014/12/17; 2008/10/28
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	12/17/2014
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	12/17/2014
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	12/17/2014
Cadmium fluoride	7790-79-6	12/17/2014
Cadmium sulphate	10124-36-4, 31119-53-6	12/17/2014
reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)		12/17/2014
1,2-Benzenedicarboxylic acid, dihexylester, branched and linear	68515-50-4	6/16/2014
Cadmium chloride	10108-64-2	6/16/2014
Sodium perborate,perboric acid, sodium salt		6/16/2014
Sodium peroxometaborate	7632-4-4,	6/16/2014
Cadmium sulphide	1306-23-6	12/16/2013
Dihexyl phthalate	84-75-3	12/16/2013
Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	12/16/2013
Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7	12/16/2013
Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	12/16/2013
Lead di(acetate)	301-04-2	12/16/2013
Trixylyl phosphate	25155-23-1	12/16/2013
4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]		6/20/2013
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	6/20/2013
Cadmium	7440-43-9	6/20/2013
Cadmium oxide	1306-19-0	6/20/2013
Dipentyl phthalate (DPP)	131-18-0	6/20/2013
Pentadecafluorooctanoic acid (PFOA)	335-67-1	6/20/2013
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	12/19/2012
1,2-Diethoxyethane	629-14-1	12/19/2012

1-bromopropane (n-propyl bromide)	106-94-5	12/19/2012
3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	12/19/2012
4,4'-methylenedi-o-toluidine	838-88-0	12/19/2012
4,4'-oxydianiline and its salts	101-80-4	12/19/2012
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]		12/19/2012
4-Aminoazobenzene	60-09-3	12/19/2012
4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	12/19/2012
4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]		12/19/2012
6-methoxy-m-toluidine (p-cresidine)	120-71-8	12/19/2012
[Phthalato(2-)]dioxotrilead	69011-06-9	12/19/2012
Acetic acid, lead salt, basic	51404-69-4	12/19/2012
Biphenyl-4-ylamine	92-67-1	12/19/2012
Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE)	1163-19-5	12/19/2012
Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry]	85-42-7, 13149-00-3, 14166-21-3	12/19/2012
Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCA)	123-77-3	12/19/2012
Dibutyltin dichloride (DBTC)	683-18-1	12/19/2012
Diethyl sulphate	64-67-5	12/19/2012
Diisopentylphthalate	605-50-5	12/19/2012
Dimethyl sulphate	77-78-1	12/19/2012
Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	12/19/2012
Dioxobis(stearato)trilead	12578-12-0	12/19/2012
Fatty acids, C16-18, lead salts	91031-62-8	12/19/2012
Furan	110-00-9	12/19/2012
Henicosafuoroundecanoic acid	2058-94-8	12/19/2012
Heptacosafuorotetradecanoic acid	376-06-7	12/19/2012
Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans- stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry]	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	12/19/2012
Lead bis(tetrafluoroborate)	13814-96-5	12/19/2012
Lead cyanamidate	20837-86-9	12/19/2012

Lead dinitrate	10099-74-8	12/19/2012
Lead monoxide (lead oxide)	1317-36-8	12/19/2012
Lead oxide sulfate	12036-76-9	12/19/2012
Lead titanium trioxide	12060-00-3	12/19/2012
Lead titanium zirconium oxide	12626-81-2	12/19/2012
Methoxyacetic acid	625-45-6	12/19/2012
Methyloxirane (Propylene oxide)	75-56-9	12/19/2012
N,N-dimethylformamide	68-12-2	12/19/2012
N-methylacetamide	79-16-3	12/19/2012
N-pentyl-isopentylphthalate	776297-69-9	12/19/2012
o-aminoazotoluene	97-56-3	12/19/2012
o-Toluidine	95-53-4	12/19/2012
Orange lead (lead tetroxide)	1314-41-6	12/19/2012
Pentacosafuorotridecanoic acid	72629-94-8	12/19/2012
Pentalead tetraoxide sulphate	12065-90-6	12/19/2012
Pyrochlore, antimony lead yellow	8012-00-8	12/19/2012
Silicic acid (H ₂ Si ₂ O ₅), barium salt (1:1), lead-doped [with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD), the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008]	68784-75-8	12/19/2012
Silicic acid, lead salt	11120-22-2	12/19/2012
Sulfurous acid, lead salt, dibasic	62229-08-7	12/19/2012
Tetraethyllead	78-00-2	12/19/2012
Tetralead trioxide sulphate	12202-17-4	12/19/2012
Tricosafuorododecanoic acid	307-55-1	12/19/2012
Trilead bis(carbonate) dihydroxide	1319-46-6	12/19/2012
Trilead dioxide phosphonate	12141-20-7	12/19/2012
1,2-bis(2-methoxyethoxy)ethane (TEGDME, triglyme)	112-49-2	6/18/2012
1,2-dimethoxyethane, ethylene glycol dimethyl ether (EGDME)	110-71-4	6/18/2012
1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	6/18/2012
1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	59653-74-6	6/18/2012
4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	561-41-1	6/18/2012
4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	6/18/2012

[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	548-62-9	6/18/2012
[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	2580-56-5	6/18/2012
Diboron trioxide	1303-86-2	6/18/2012
Formamide	75-12-7	6/18/2012
Lead(II) bis(methanesulfonate)	17570-76-2	6/18/2012
N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	6/18/2012
α,α-Bis[4-(dimethylamino)phenyl]-4(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	6786-83-0	6/18/2012
1,2-Dichloroethane	107-06-2	12/19/2011
2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	12/19/2011
2-Methoxyaniline, o-Anisidine	90-04-0	12/19/2011
4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	12/19/2011
Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm) c) alkaline oxide and alkali earth oxide (Na ₂ O+K ₂ O+CaO+MgO+BaO) content less or equal to 18% by weight		12/19/2011
Arsenic acid	7778-39-4	12/19/2011
Bis(2-methoxyethyl) ether	111-96-6	12/19/2011
Bis(2-methoxyethyl) phthalate	117-82-8	12/19/2011
Calcium arsenate	7778-44-1	12/19/2011
Dichromium tris(chromate)	24613-89-6	12/19/2011
Formaldehyde, oligomeric reaction products with aniline	25214-70-4	12/19/2011
Lead diazide, Lead azide	13424-46-9	12/19/2011
Lead dipicrate	6477-64-1	12/19/2011
Lead styphnate	15245-44-0	12/19/2011
N,N-dimethylacetamide	127-19-5	12/19/2011
Pentazinc chromate octahydroxide	49663-84-5	12/19/2011
Phenolphthalein	77-09-8	12/19/2011

Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	12/19/2011
Trilead diarsenate	3687-31-8	12/19/2011
Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm). c) alkaline oxide and alkali earth oxide (Na ₂ O+K ₂ O+CaO+MgO+BaO) content less or equal to 18% by weight		12/19/2011
Cobalt dichloride	7646-79-9	2011/06/20 - 2008/10/28
1,2,3-trichloropropane	96-18-4	6/20/2011
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	6/20/2011
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	6/20/2011
1-Methyl-2-pyrrolidone (NMP)	872-50-4	6/20/2011
2-Ethoxyethyl acetate	111-15-9	6/20/2011
Hydrazine	302-01-2, 7803-57-8	6/20/2011
Strontium chromate	7789-6-2,	6/20/2011
2-Ethoxyethanol	110-80-5	12/15/2010
2-Methoxyethanol	109-86-4	12/15/2010
Acids generated from chromium trioxide and their oligomers. Names of the acids and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid.	7738-94-5, 13530-68-2	12/15/2010
Chromium trioxide	1333-82-0	12/15/2010
Cobalt(II) carbonate	513-79-1	12/15/2010
Cobalt(II) diacetate	71-48-7	12/15/2010
Cobalt(II) dinitrate	10141-05-6	12/15/2010
Cobalt(II) sulphate	10124-43-3	12/15/2010
Ammonium dichromate	7789-9-5,	6/18/2010
Boric acid	10043-35-3, 11113-50-1	6/18/2010
Disodium tetraborate, anhydrous	1303-96-4, 1330-43-4, 12179-04-3	6/18/2010
Potassium chromate	7789-00-6	6/18/2010
Potassium dichromate	7778-50-9	6/18/2010
Sodium chromate	7775-11-3,	6/18/2010
Tetraboron disodium heptaoxide, hydrate	12267-73-1	6/18/2010
Trichloroethylene	79-01-6	6/18/2010

Acrylamide	79-06-1	3/30/2010
2,4-Dinitrotoluene (2,4-DNT)	121-14-2	1/13/2010
Anthracene oil	90640-80-5	1/13/2010
Anthracene oil, anthracene paste	90640-81-6	1/13/2010
Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	1/13/2010
Anthracene oil, anthracene paste, distn. lights	91995-17-4	1/13/2010
Anthracene oil, anthracene-low	90640-82-7	1/13/2010
Diisobutyl phthalate (DIBP)	84-69-5	1/13/2010
Lead chromate	7758-97-6	1/13/2010
Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	1/13/2010
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	1/13/2010
Pitch, coal tar, high temp.	65996-93-2	1/13/2010
Tris(2-chloroethyl)phosphate	115-96-8	1/13/2010
4,4'- Diaminodiphenylmethane (MDA)	101-77-9	10/28/2008
5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene)	81-15-2	10/28/2008
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	10/28/2008
Anthracene	120-12-7	10/28/2008
Benzyl butyl phthalate (BBP)	85-68-7	10/28/2008
Bis(tributyltin) oxide (TBTO)	56-35-9	10/28/2008
Diarsenic pentaoxide	1303-28-2	10/28/2008
Diarsenic trioxide	1327-53-3	10/28/2008
Dibutyl phthalate (DBP)	84-74-2	10/28/2008
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	25637-99-4, 3194-55-6, 134237-50-6, 134237-51-7, 134237-52-8	10/28/2008
Lead hydrogen arsenate	7784-40-9	10/28/2008
Sodium dichromate	7789-12-0, 10588-01-9	10/28/2008
Triethyl arsenate	15606-95-8	10/28/2008



Signature:

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