

March 3, 2020

Subject: REAAH – about Substances of Very High Concern (SVHC)

Product(s):
PGX-5KR Ink series,

Dear Sir / Madam,

We herewith confirm that our product PGX-5KR series do not contain more than 0.1% of the following substances:

The above mentioned substances are not used as raw material in the production process of our products. We do not expect that SVHC substances will be formed in the reaction. Therefore, we do not expect that these materials are contained. Regular analytical controls do not take place.

Yours faithfully,

d.gen, Inc.
Seung-il Kong
Manager



Attachment: Candidate list of Substances of Very High Concern (SVHC) – 2020-01-16

Substance name	CAS No.	EC No.	Date of inclusion
1-bromopropane (n-propyl bromide)	106-94-5	203-445-0	2012/12/19
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	276-158-1	2011/06/20
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	271-084-6	2011/06/20
1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2- Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of dihexyl phthalate (EC No. 201-559- 5)	68515-51-5 68648-93-1	271-094-0 272-013-1	2015/06/15
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	271-093-5	2014/06/16
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2	2012/12/19
1-Methyl-2-pyrrolidone	872-50-4	212-828-1	2011/06/20
1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	203-977-3	2012/06/18
1,2-dichloroethane	107-06-2	203-458-1	2011/12/19
1,2-Diethoxyethane	629-14-1	211-076-1	2012/12/19
1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	203-794-9	2012/06/18
1,2,3-Trichloropropane	96-18-4	202-486-1	2011/06/20
1,3-propanesultone	1120-71-4	214-317-9	2015/12/17
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	423-400-0	2012/06/18
1,3,5-tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	219-514-3	2012/06/18
1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one, 3-benzylidene camphor; 3-BC	15087-24-8	239-139-9	2019/01/15
2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	401-720-1	2019/01/15
2,2'-dichloro-4,4'-methenedianiline	101-14-4	202-918-9	2011/12/19
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	253-037-1	2015/12/17
2-(2H-benzotriazol-2-yl)-4,6- ditertpentylphenol (UV-328)	25973-55-1	247-384-8	2014/12/17

2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides covering any of their individual isomers and combinations thereof	-	-	2019/07/16
2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	223-383-8	2015/12/17
2,4-Dinitrotoluene	121-14-2	204-450-0	2010/01/13
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	223-346-6	2014/12/17
2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	404-360-3	2020/01/16
2-Ethoxyethanol	110-80-5	203-804-1	2010/12/15
2-Ethoxyethyl acetate	111-15-9	203-839-2	2011/06/20
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	239-622-4	2014/12/17
2-Methoxyaniline, o-Anisidine	90-04-0	201-963-1	2011/12/19
2-Methoxyethanol	109-86-4	203-713-7	2010/12/15
2-methoxyethyl acetate	110-49-6	203-772-9	2019/07/16
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	400-600-6	2020/01/16
3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	421-150-7	2012/12/19
4-Aminoazobenzene	60-09-3	200-453-6	2012/12/19
4-Heptylphenol, branched and linear substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof	-	-	2017/01/12
4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	202-453-1	2012/12/19
4-Nonylphenol, branched and linear	-	-	2012/12/19
4-Nonylphenol, branched and linear, ethoxylated	-	-	2013/06/20
[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride	548-62-9	208-953-6	2012/06/18
[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride	2580-56-5	219-943-6	2012/06/18
4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	209-218-2	2012/06/18
4,4'-bis(dimethylamino)benzophenone (Michler's	90-94-8	202-027-5	2012/06/18

ketone)			
4,4'- Diaminodiphenylmethane	101-77-9	202-974-4	2008/10/28
4,4'-isopropylidenediphenol	80-05-7	201-245-8	2017/01/12
4,4'- methylenedi-o-toluidine	838-88-0	212-658-8	2012/12/19
4,4'-oxydianiline and its salts	101-80-4	202-977-0	2012/12/19
4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	205-426-2	2011/12/19
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated	-	-	2012/12/19
4-tert-butylphenol	98-54-4	202-679-0	2019/07/16
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 individual stereoisomers of [1] and [2] or any combination thereof]	-	-	2015/06/15
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4	2008/10/28
6-methoxy-m-toluidine (p-cresidine)	120-71-8	201-419-1	2012/12/19
α,α -Bis[4-(dimethylamino)phenyl]-4(phenylamino)naphthalene-1-methanol	6786-83-0	229-851-8	2012/06/18
Acetic acid, lead salt, basic	51404-69-4	257-175-3	2012/12/19
Acrylamide	79-06-1	201-173-7	2010/03/30
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	287-476-5	2008/10/28
Aluminosilicate, Refractory Ceramic Fibres		(650-017-00-8*)	2010/01/13 2011/12/19
o-aminoazotoluene	97-56-3	202-591-2	2012/12/19
Ammonium dichromate	7789-09-5	232-143-1	2010/06/18
Ammonium pentadecafluorooctanoate	3825-26-1	223-320-4	2013/06/20
Anthracene	120-12-7	204-371-1	2008/10/28
Anthracene oil	90640-80-5	292-602-7	2010/01/13
Anthracene oil, anthracene paste	90640-81-6	292-603-2	2010/01/13
Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	295-275-9	2010/01/13
Anthracene oil, anthracene paste, distn. Lights	91995-17-4	295-278-5	2010/01/13
Anthracene oil, anthracene-low	90640-82-7	292-604-8	2010/01/13
Arsenic acid	7778-39-4	231-901-9	2011/12/19
Benz[a]anthracene	56-55-3, 1718-53-2	200-280-6	2018/01/15
Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (TMA)	552-30-7	209-008-0	2018/06/27
Benzo[def]chrysene	50-32-8	200-028-5	2016/06/20

Benzo[ghi]perylene	191-24-2	205-883-8	2018/06/27
Benzo[k]fluoranthene	207-08-9	205-916-6	2019/01/15
Benzyl butyl phthalate (BBP)	85-68-7	201-622-7	2008/10/28
Biphenyl-4-ylamine	92-67-1	202-177-1	2012/12/19
Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7	204-211-0	2008/10/28
Bis(2-methoxyethyl) ether	111-96-6	203-924-4	2011/12/19
Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6	2011/12/19
Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	214-604-9	2012/12/19
Bis(tributyltin)oxide (TBTO)	56-35-9	200-268-0	2008/10/28
Boric acid	10043-35-3 / 11113-50-1	233-139-2 / 234-343-4	2010/06/18
Cadmium	7440-43-9	231-152-8	2013/06/20
Cadmium carbonate	513-78-0	208-168-9	2018/01/15
Cadmium chloride	10108-64-2	233-296-7	2014/06/16
Cadmium fluoride	7790-79-6	232-222-0	2014/12/17
Cadmium hydroxide	21041-95-2	244-168-5	2018/01/15
Cadmium nitrate	10022-68-1, 10325-94-7	233-710-6	2018/01/15
Cadmium oxide	1306-19-0	215-146-2	2013/06/20
Cadmium sulphate	10124-36-4, 31119-53-6	233-331-6	2014/12/17
Cadmium sulphide	1306-23-6	215-147-8	2013/12/16
Calcium arsenate	7778-44-1	231-904-5	2011/12/19
Chromic acid,	7738-94-5	231-801-5	2010/12/15
Chrysene	218-01-9, 1719-03-5	205-923-4	2018/01/15
Oligomers of chromic acid and dichromic acid	-	-	
Dichromic acid	13530-68-2	236-881-5	
Chromium trioxide	1333-82-0	215-607-8	2010/12/15
Cobalt dichloride	7646-79-9	231-589-4	2008/10/28 2011/06/20
Cobalt(II) carbonate	513-79-1	208-169-4	2010/12/15
Cobalt(II) diacetate	71-48-7	200-755-8	2010/12/15
Cobalt(II) dinitrate	10141-05-6	233-402-1	2010/12/15

Cobalt(II) sulphate	10124-43-3	233-334-2	2010/12/15
Cyclohexane-1,2-dicarboxylic anhydride, cis-cyclohexane-1,2-dicarboxylic anhydride, trans-cyclohexane-1,2-dicarboxylic anhydride	85-42-7, 13149-00-3, 14166-21-3	201-604-9, 236-086-3, 238-009-9	2012/12/19
Decamethylcyclopentasiloxane (D5)	541-02-6	208-764-9	2018/06/27
Diarsenic pentaoxide	1303-28-2	215-116-9	2008/10/28
Diarsenic trioxide	1327-53-3	215-481-4	2008/10/28
Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8	2012/12/19
Diboron trioxide	1303-86-2	215-125-8	2012/06/18
Dibutyl phthalate (DBP)	84-74-2	201-557-4	2008/10/28
Dibutyltin dichloride (DBTC)	683-18-1	211-670-0	2012/12/19
Dichromium tris(chromate)	24613-89-6	246-356-2	2011/12/19
Dicyclohexyl phthalate (DCHP)	84-61-7	201-545-9	2018/06/27
Diethyl sulphate	64-67-5	200-589-6	2012/12/19
Dihexyl phthalate	84-75-3	201-559-5	2013/12/16
Diisobutyl phthalate	84-69-5	201-553-2	2010/01/13
Diisohexyl phthalate	71850-09-4	276-090-2	2020/01/16
Diisopentylphthalate	605-50-5	210-088-4	2012/12/19
Dimethyl sulphate	77-78-1	201-058-1	2012/12/19
Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	201-861-7	2012/12/19
Dioxobis(stearato)trilead	12578-12-0	235-702-8	2012/12/19
Dipentyl phthalate (DPP)	131-18-0	205-017-9	2013/06/20
Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	209-358-4	2013/12/16
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	217-710-3	2013/12/16
Disodium octaborate	12008-41-2	234-541-0	2018/06/27
Disodium tetraborate, anhydrous	1303-96-4 / 1330-43-4 / 12179-04-3	215-540-4	2010/06/18
Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octa deca-7,15-diene ("Dechlorane Plus"™) covering any of its individual anti- and syn-isomers or any combination thereof	-	-	2018/01/15
Dodecamethylcyclohexasiloxane (D6)	540-97-6	208-762-8	2018/06/27

Ethylenediamine (EDA)	107-15-3	203-468-6	2018/06/27
Fatty acids, C16-18, lead salts	91031-62-8	292-966-7	2012/12/19
Fluoranthene	206-44-0; 93951-69-0	205-912-4	2019/01/15
Formaldehyde, oligomeric reaction products with aniline	25214-70-4	500-036-1	2011/12/19
Formamide	75-12-7	200-842-0	2012/06/18
Furan	110-00-9	203-727-3	2012/12/19
Henicosfluoroundecanoic acid	2058-94-8	218-165-4	2012/12/19
Heptacosfluorotetradecanoic acid	376-06-7	206-803-4	2012/12/19
Hexabromocyclododecane (HBCDD)	25637-99-4	247-148-4	2008/10/28
Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	247-094-1, 243-072-0, 256-356-4, 260-566-1	2012/12/19
Hydrazine	302-01-2/ 7803-57-8	206-114-9	2011/06/20
Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	202-506-9	2013/12/16
Lead	7439-92-1	231-100-4	2018/06/27
Lead(II) bis(methanesulfonate)	17570-76-2	401-750-5	2012/06/18
Lead bis(tetrafluoroborate)	13814-96-5	237-486-0	2012/12/19
Lead chromate	7758-97-6	231-846-0	2010/01/13
Lead chromate molybdate 7ulphate red (C.I. Pigment Red 104)	12656-85-8	235-759-9	2010/01/13
Lead cyanamidate	20837-86-9	244-073-9	2012/12/19
Lead di(acetate)	301-04-2	206-104-4	2013/12/16
Lead diazide	13424-46-9	236-542-1	2011/12/19
Lead dinitrate	10099-74-8	233-245-9	2012/12/19
Lead dipicrate	6477-64-1	229-335-2	2011/12/19
Lead hydrogen arsenate	7784-40-9	232-064-2	2008/10/28
Lead monoxide (lead oxide)	1317-36-8	215-267-0	2012/12/19
Lead oxide sulfate	12036-76-9	234-853-7	2012/12/19
Lead styphnate	15245-44-0	239-290-0	2011/12/19
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	215-693-7	2010/01/13
Lead titanium trioxide	12060-00-3	235-038-9	2012/12/19

Lead titanium zirconium oxide	12626-81-2	235-727-4	2012/12/19
Methoxyacetic acid	625-45-6	210-894-6	2012/12/19
Methyloxirane (Propylene oxide)	75-56-9	200-879-2	2012/12/19
Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2 3108-42-7 3830-45-3	206-400-3 221-470-5 -	2017/01/12
Nitrobenzene	98-95-3	202-716-0	2015/12/17
N-methylacetamide	79-16-3	201-182-6	2012/12/19
N-phenyl-isopentylphthalate	776297-69-9	-	2012/12/19
N,N-dimethylacetamide	127-19-5	204-826-4	2011/12/19
N,N-dimethylformamide	68-12-2	200-679-5	2012/12/19
N,N,N',N'-tetramethyl-4,4'-methylenedianiline	101-61-1	202-959-2	2012/06/18
Octamethylcyclotetrasiloxane (D4)	556-67-2	209-136-7	2018/06/27
Orange lead (lead tetroxide)	1314-41-6	215-235-6	2012/12/19
p-(1,1-dimethylpropyl)phenol	80-46-6	201-280-9	2017/01/12
Pentacosafuorotridecanoic acid	72629-94-8	276-745-2	2012/12/19
Pentadecafluorooctanoic acid (PFOA)	335-67-1	206-397-9	2013/06/20
Pentalead tetraoxide sulphate	12065-90-6	235-067-7	2012/12/19
Pentazinc chromate octahydroxide	49663-84-5	256-418-0	2011/12/19
Perfluorobutane sulfonic acid (PFBS) and its salts			2020/01/16
Perfluorohexane-1-sulfonic acid and its salts (PFHxS)	-	-	2017/07/07
Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4	206-801-3	2015/12/17
Phenanthrene	85-01-8	201-581-5	2019/01/15
[Phthalato(2-)]dioxotrilead	69011-06-9	273-688-5	2012/12/19
Phenolphthalein	77-09-8	201-004-7	2011/12/19
Pitch, coal tar, high temperature	65996-93-2	266-028-2	2010/01/13
Potassium chromate	7789-00-6	232-140-5	2010/06/18
Potassium dichromate	7778-50-9	231-906-6	2010/06/18
Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	234-329-8	2011/12/19
Pyrene	129-00-0; 1718-52-1	204-927-3	2019/01/15

Pyrochlore, antimony lead yellow	8012-00-8	232-382-1	2012/12/19
Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (Rp-HP) with $\geq 0,1\%$ w/w 4-heptylphenol, branched and linear (4-HPbl)			2018/01/15
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	-	-	2014/12/17
Silicic acid ($\text{H}_2\text{Si}_2\text{O}_5$), barium salt (1:1), lead-doped	68784-75-8	272-271-5	2012/12/19
Silicic acid, lead salt	11120-22-2	234-363-3	2012/12/19
Sodium chromate	7775-11-3	231-889-5	2010/06/18
Sodium dichromate, dihydrate	7789-12-0 / 10588-01-9	234-190-3	2008/10/28
Sodium perborate; perboric acid, sodium salt	-	239-172-9; 234-390-0	2014/06/16
Sodium peroxometaborate	7632-04-4	231-556-4	2014/06/16
Strontium chromate	7789-06-2	232-142-6	2011/06/20
Sulfurous acid, lead salt, dibasic	62229-08-7	263-467-1	2012/12/19
Terphenyl, hydrogenated	61788-32-7	262-967-7	2018/06/27
Tetraboron disodium heptaoxide, hydrate	12267-73-1	235-541-3	2010/06/18
Tetraethyllead	78-00-2	201-075-4	2012/12/19
Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with $\geq 0.1\%$ w/w of 4-nonylphenol, branched and linear (4- NP)	-	-	2019/07/16

* Index number in Annex VI 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006