

BURBERRY
ESTABLISHED 1856

**MANUFACTURING
RESTRICTED
SUBSTANCES LIST**

AND

**IMPLEMENTATION
GUIDELINES**

VERSION OCTOBER 2014

1.0 INTRODUCTION

Burberry's Manufacturing Restricted Substance List (MRSL)¹ details the restriction limits applicable to the chemical formulations used in the manufacturing processes of all Burberry textile and leather product.

Burberry's MRSL is fully complicit with the ZDHC MRSL, with the exception of AZO-Dyes and Per- and Poly-Fluorinated Chemicals, where Burberry's stipulated limit goes beyond. Burberry's MRSL also includes restriction limits for Leather chemical formulations. This document also includes guidance for implementation of the Burberry MRSL.

Burberry PLC, London, October 2014

¹ Burberry retains the right to update the MRSL periodically and will ensure any new materials of concern that may be highlighted by Regulatory bodies and Industry experts are included accordingly

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3.0 BURBERRY MRS L

Manufacturing Restricted Substances	CAS Number	Maximum Contamination limit Chemical Formulations	Test Method
AP & APEO incl. isomers are banned from use			
NP, mixed isomers	104-40-5, 11066-49-2, 25154-52-3, 84852-15-3	250 PPM	DIN EN 18254, ASTM D7742
OP, mixed isomers	140-66-9, 1806-26-4, 27193-28-8	250 PPM	
OPEO	9002-93-1, 9036-19-5, 68987-90-6	500 PPM	
NPEO	9016-45-9, 26027-38-3, 37205-87-1, 68412-54-4, 127087-87-0	500 PPM	
Chlorinated solvents			
1,2-dichloroethane	107-06-2	5 PPM	EN ISO 22155
Methylene chloride	75-09-2	5 PPM	
Trichloroethylene	79-01-6	40 PPM	
Tetrachloroethylene	127-18-4	5 PPM	
Chlorobenzenes & Chlorotoluenes			
1,2-dichlorobenzene	95-50-1	1000 PPM	DIN 54323
Other isomers of mono-, di-, tri-, tetra-, penta- and hexa-chlorobenzene and mono-, di-, tri-, tetra- and penta- chlorotoluene	various	SUM < 200 PPM	
Chlorophenols			
Tetrachlorophenol (TeCP)	25167-83-3	SUM < 20 PPM	ISO 17070 (KOH)
Pentachlorophenol (PCP)	87-86-5		
Mono-, di-, and tri- chlorophenols	various	SUM < 50 PPM	
Dyes- Azo			
4,4'-methylene-bis-(2-chloro-aniline)	101-14-4	150 PPM	DIN EN 14362
4,4'-methylenedianiline	101-77-9	150 PPM	
4,4'-oxydianiline	101-80-4	150 PPM	
4-chloroaniline	106-47-8	150 PPM	
3,3'-dimethoxybenzidine	119-90-4	150 PPM	
3,3'dimethylbenzidine	119-93-7	150 PPM	
6-methoxy-m-toluidine	120-71-8	150 PPM	
2,4,5'trimethylaniline	137-17-7	150 PPM	
4,4'-thiodianiline	139-65-1	150 PPM	
4- aminoazobenzene	60-09-3	150 PPM	
4- methoxy-m-phenylenediamine	615-05-4	150 PPM	
4,4'methylenedi-o-toluidine	838-88-0	150 PPM	
2,6-xylidine	87-62-7	150 PPM	
o-anisdine	90-04-0	150 PPM	
2-naphthylamine	91-59-8	150 PPM	
3,3'-dichlorobenzidine	91-94-1	150 PPM	
4-aminodiphenyl	92-67-1	150 PPM	
Benzidine	92-87-5	150 PPM	
o-toluidine	95-53-4	150 PPM	

Manufacturing Restricted Substances	CAS Number	Maximum Contamination limit Chemical Formulations	Test Method
Dyes- Azo continued			
2,4-xylydine	95-68-1	150 PPM	DIN EN 14362
4-chloro-o-toluidine	95-69-2	150 PPM	
4-methyl-m-phenylenediamine	95-80-7	150 PPM	
o-aminoazotoluene	97-56-3	150 PPM	
5-nitro-o-toluidine	99-55-8	150 PPM	
Navy Blue Colourant	118685-33-9	150 PPM	
Dyes- Other			
C.I. Direct Black 38	1937-37-7	250 PPM	DIN EN ISO 16373-2, DIN 54231
C.I. Direct Blue 6	2602-46-2	250 PPM	
C.I. Acid Red 26	3761-53-3	250 PPM	
C.I. Basic Red 9	569-61-9	250 PPM	
C.I. Direct Red 28	573-58-0	250 PPM	
C.I. Basic Violet 14	632-99-5	250 PPM	
C.I. Disperse Blue 1	2475-45-8	250 PPM	
C.I. Disperse Blue 3	2475-46-9	250 PPM	
C.I. Basic Blue 26 (with Michler's Ketone >0.1%)	2580-56-5	250 PPM	
C.I. Basic Green 4 (malachite green chloride)	569-64-2	250 PPM	
C.I. Basic Green 4 (malachite green oxalate)	2437-29-8	250 PPM	
C.I. Basic Green 4 (malachite green)	10309-95-2	250 PPM	
Disperse Orange 11	82-28-0	250 PPM	
Dyes- Disperse			
Disperse Yellow 1	119-15-3	250 PPM	DIN 54231
Disperse Blue 102	12222-97-8	250 PPM	
Disperse Blue 106	12223-01-7	250 PPM	
Disperse Yellow 39	12236-29-2	250 PPM	
Disperse Orange 37/59/76	13301-61-6	250 PPM	
Disperse Brown 1	23355-64-8	250 PPM	
Disperse Orange 1	2581-69-3	250 PPM	
Disperse Yellow 3	2832-40-8	250 PPM	
Disperse Red 11	2872-48-2	250 PPM	
Disperse Red 1	2872-52-8	250 PPM	
Disperse Red 17	3179-89-3	250 PPM	
Disperse Blue 7	3179-90-6	250 PPM	
Disperse Blue 26	3860-63-7	250 PPM	
Disperse Yellow 49	54824-37-2	250 PPM	
Disperse Blue 35	12222-75-2	250 PPM	
Disperse Blue 124	61951-51-7	250 PPM	
Disperse Yellow 9	6373-73-5	250 PPM	
Disperse Orange 3	730-40-5	250 PPM	
Disperse Blue 35	56524-77-7	250 PPM	

Manufacturing Restricted Substances	CAS Number	Maximum Contamination limit Chemical Formulations	Test Method
Flame Retardants			
Tris(2-chloroethyl)phosphate (TCEP)	115-96-8	250 PPM	EN ISO 17881-1, EN ISO 17881-2
Decabromodiphenyl ether (DecaBDE)	1163-19-5	250 PPM	
Tris(2,3,-dibromopropyl)- phosphate (TRIS)	126-72-7	250 PPM	
Pentabromodiphenyl ether (PentaBDE)	32534-81-9	250 PPM	
Octabromodiphenyl ether (OctaBDE)	32536-52-0	250 PPM	
Bis(2,3-dibromopropyl)phosphate (BIS)	5412-25-9	250 PPM	
Tris(1-aziridinyl)phosphine oxide (TEPA)	545-55-1	250 PPM	
Polybromobiphenyls (PBB)	59536-65-1	250 PPM	
Tetrabromobisphenol A (TBBPA)	79-94-7	250 PPM	
Hexabromocyclodecane (HBCDD)	3194-55-6	250 PPM	
2,2-bis(bromomethyl)-1,3-propanediol (BBMP)	3296-90-0	250 PPM	
Tris(1,3-dichloro-isopropyl) phosphate (TDCP)	13674-87-8	250 PPM	
Glycols			
Bis(2-methoxyethyl)-ether	111-96-6	50 PPM	EPA 8270D
2-ethoxyethanol	110-80-5	50 PPM	
2-ethoxyethyl acetate	111-15-9	50 PPM	
Ethylene glycol dimethyl ether	110-71-4	50 PPM	
2-methoxyethanol	109-86-4	50 PPM	
2-methoxyethylacetate	110-49-6	50 PPM	
2-methoxypropylacetate	70657-70-4	50 PPM	
Triethylene glycol dimethyl ether	112-49-2	50 PPM	
Heavy Metals			
Arsenic (As)	7440-38-2	50 PPM	DIN EN ISO 17294-1, DIN EN ISO 17294-2
Cadmium (Cd)	7440-43-9	20 PPM	
Mercury (Hg)	7439-97-6	4 PPM	
Lead (Pb)	7439-92-1	100 PPM	
Chromium VI (CrVI)	18540-29-9	10 PPM	
Organotin Compounds			
Dibutyltin (DBT)	Multiple	20 PPM	DIN EN ISO 22155
Dimethyltin (DMT)	Multiple	5 PPM	
Monobutyltin (MBT)	Multiple	5 PPM	
Monooctyltin (MOT)	Multiple	5 PPM	
Dioctyltin (DOT)	Multiple	5 PPM	
Tricyclohexyltin (TCyHT)	Multiple	5 PPM	
Trioctyltin (TOT)	Multiple	5 PPM	
Tripropyltin (TPT)	Multiple	5 PPM	
Tributyltin (TBT)	Multiple	5 PPM	
Trimethyltin (TMT)	Multiple	5 PPM	
Triphenyltin (TPhT)	Multiple	5 PPM	
Tetrabutyltin (TebT)	Multiple	5 PPM	

Manufacturing Restricted Substances	CAS Number	Maximum Contamination limit Chemical Formulations	Test Method
Perfluorinated and Polyfluorinated Chemicals- Long Chain (PFC's) are banned from use			
Perfluorooctane sulfonate (PFOS) and related substances	Multiple	SUM < 2PPM	GEN/TS 15968
Perfluorooctanoic acid (PFOA)	335-67-1	2 PPM	
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (EtFOSE)	1691-99-2	2 PPM	
Perfluoro-3,7-dimethylotanoic Acid (PF-3,7-DMOA)	172155-07-6	2 PPM	
1H,1H,2H,2H- Perfluorooctylacrylate (6:2 FTA)	17527-29-6	2 PPM	
1H,1H,2H,2H- Perfluorododecylacrylate (10:2 FTA)	17741-60-5	2 PPM	
Perfluoroundecanoic acid (PFUdA)	2058-94-8	2 PPM	
1H,1H,2H,2H- Perfluorooctanesulphonic acid (1H,1H,2H,2H-PFOS)	27619-97-2	2 PPM	
1H,1H,2H,2H- Perfluorodecylacrylate (8:2 FTA)	27905-45-9	2 PPM	
Perfluorododecanoic acid (PFDoA)	307-55-1	2 PPM	
N-methylperfluoro-1-octanesulfonamide (MeFOSA)	31506-32-8	2 PPM	
perfluorodecanoic acid (PFDA)	335-76-2	2 PPM	
2H,2H,3H,3H- Perfluoroundecanoic Acid (H4PFUnA)	34598-33-9	2 PPM	
perfluorononanoic acid (PFNA)	375-95-1	2 PPM	
Perfluorotetradecanoic acid (PFTeA)	376-06-7	2 PPM	
N-ethylperfluoro-1-octanesulfonamide (EtFOSA)	4151-50-2	2 PPM	
perfluoroundecanoic acid (PFUnA)	4234-23-5	2 PPM	
1H,1H,2H,2H-Perfluoro-1-Decanol (8:2 FTOH)	678-39-7	2 PPM	
perfluorotridecanoic acid (PFTrA)	72629-94-8	2 PPM	
perfluorooctane sulfonamide (PFOSA)	754-91-6	2 PPM	
1H,1H,2H,2H-Perfluoro-1-Dodecanol (10:2 FTOH)	865-86-1	2 PPM	
7H-Dodecanefluoroheptane Acid	No CAS available	2 PPM	
2H,2H-Perfluorodecane Acid	No CAS available	2 PPM	
1H,1H,2H,2H-Perfluorooctanesulphonic acid	No CAS available	2 PPM	
Phthalates are banned from use			
Di(ethylhexyl) phthalate (DEHP)	117-81-7	SUM < 250 PPM	DIN EN ISO 14389
Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8		
Di-n-octyl phthalate (DNOP)	117-84-0		
Di-iso-decyl phthalate (DIDP)	26761-40-0		
Di-isononyl phthalate (DINP)	28553-12-0		
Di-n-hexyl phthalate (DnHP)	84-75-3		
Dibutyl phthalate (DBP)	84-74-2		
Benzyl butyl phthalate (BBP)	85-68-7		
Dinonyl phthalate (DNP)	84-76-4		
Diethyl phthalate (DEP)	84-66-2		
Di-n-propyl phthalate (DPRP)	131-16-8		
Di-isobutyl phthalate (DIBP)	84-69-5		
Di-cyclohexyl phthalate (DCHP)	84-61-7		
Di-iso-octyl phthalate (DIOP)	27554-26-3		
1,2-benzenedicarboxylic acid, di-C7-11 branched and linearalkyl esters (DHNUP)	68515-42-4		
1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6		

Manufacturing Restricted Substances	CAS Number	Maximum Contamination limit Chemical Formulations	Test Method
Polycyclic Aromatic Hydrocarbons (PAH)			
Benzo[a]pyrene (BaP)	50-32-8	20 PPM	ZEK 01.4-08
Anthracene	120-12-7	SUM < 200 PPM	
Pyrene	129-00-0		
Benzo[ghi]perylene	191-24-2		
Benzo[e]pyrene	192-97-2		
Indeno[1,2,3-cd]pyrene	193-39-5		
Benzo[j]fluoranthene	205-82-3		
Benzo[b]fluoranthene	205-99-2		
Fluoranthene	206-44-0		
Benzo[k]fluoranthene	207-08-9		
Acenaphthylene	208-96-8		
Chrysene	218-01-9		
Dibenz[a,h]anthracene	53-70-3		
Benzo[a]anthracene	56-55-3		
Acenaphthene	83-32-9		
Phenanthrene	85-01-8		
Fluorene	86-73-7		
Naphthalene	91-20-3		
Short chain chlorinated paraffins (SCCP)			
Short chain chlorinated paraffins (C10-C13)	85535-84-8	50 PPM	EN ISO 17881-1, EN ISO 17881-2
Volatile Organic Compounds (VOC)			
Benzene	71-43-2	50 PPM	DIN EN ISO 22155
Xylene	1330-20-7	500 PPM	
o-cresol	95-48-7	500 PPM	
p-cresol	106-44-5	500 PPM	
m-cresol	108-39-4	500 PPM	

4.0 MRS L IMPLEMENTATION GUIDELINES

The purpose of this document is to:

- Provide guidance for the implementation of the MRSL
- Define minimum requirements for the implementation of the MRSL
- Establish requirements for monitoring and review of MRSL conformance
- Develop traceability of Partner raw material and chemical suppliers
- Minimise adverse effects of exposure to hazardous chemicals in Partner facilities

5.0 SCOPE

Requirements for the implementation of the MRSL outlined in this document apply to all processes associated with Burberry product.

This document shall be implemented as follows:

- **Burberry Finished Goods Vendors** shall implement this document for all in-house manufacturing processes, outsourced processes and to all upstream suppliers
- **Burberry Raw Material and Trims Suppliers** shall implement this document for all in-house manufacturing processes, outsourced processes and to all upstream suppliers

Partners shall implement the MRSL requirements in this document for all chemical formulations used in manufacturing processes associated with Burberry product.

6.0 PROCESS

The MRSL must be implemented by all direct and indirect suppliers of Burberry Product.

This document outlines the process to implement and comply with the MRSL.

This process requires the following steps:

- Commitment
- Assessment
- Management
- Monitor and Review

The Partner shall assign responsibility of the implementation process and on-going compliance with the MRSL to an employee, preferably with chemical management experience.

For the purposes of this document this person is referred to as the Chemical Manager.

6.1 Commitment

Partners shall include in the company Environmental Management System the commitment to eliminate the use of hazardous chemicals and to implement this MRSL in all its facilities and processes.

6.2 Assessment

Partners must review manufacturing processes and upstream suppliers to identify those relevant to Burberry product.

Partners must apply MRSL requirements to these processes and suppliers.

Partners must include chemical formulations present in recipes used for specific manufacturing processes associated with Burberry product.

Partners shall evaluate chemical suppliers to ensure they understand and meet the requirements of the MRSL for all incoming product.

Partners shall request chemical suppliers to confirm compliance by providing a Positive List of non-hazardous chemical formulations to procure MRSL compliant chemical formulations.

Alternatively, chemical suppliers may provide a statement of compliance (Appendix 1).

6.3 Management

The responsible Chemical Manager, with support from the Partner organisation must initiate a Chemical Management System (CMS) to support the implementation of the Burberry MRSL.

The CMS must consider all other Burberry Impact objectives. The application of the MRSL should not be in conflict with any of these objectives and activities. An example of this is where a chemical substitution has the potential to incur a significant increase in water usage.

The CMS must describe at a minimum:

- A chemical management policy (Appendix 2)
- A process to procure raw materials from suppliers who are MRSL compliant
- A process to procure chemical formulations from suppliers who are MRSL compliant
- The operation and maintenance of a chemical inventory

Minimum requirements for a chemical inventory are provided in Appendix 3.

Partners are fully accountable for their extended supply chain. The CMS shall prescribe the requirement for upstream suppliers to comply with the MRSL

Partners are expected to implement on-going training to employees and upstream suppliers to communicate these requirements and support implementation.

6.4 Monitor and Review

On a regular basis the Chemical Manager shall monitor and review MRSL conformance.

This review must include at a minimum:

- Due diligence testing of incoming chemicals
- Review and phase-out of chemical suppliers who are not meeting MRSL requirements
- Due diligence testing of incoming raw materials to monitor effective implementation of MRSL requirements by upstream suppliers
- Review of approval process for incoming raw materials to ensure MRSL compliance
- Self-assessments to ensure compliance with the CMS

7.0 RECORDS

The following records shall be maintained to demonstrate compliance with the MRSL.

- Evidence of commitment to eliminate hazardous chemicals in the MRSL (Appendix 2)
- Documentation of all upstream supplier communications and actions
- Documentation of all sources of raw material associated with Burberry product including company of purchase and batch traceability (including batch number)
- Documentation of all sources of chemical formulations associated with Burberry product including company of purchase and batch traceability (including batch number)
- Record of operation and maintenance of chemical inventory

8.0 COMMUNICATION

Burberry shall support all Partners in the implementation of this document.

Partners can use the feedback form provided in Appendix 4 to communicate issues that occur in the implementation process.

Partners shall communicate any issues with non-compliant leftover stock to Burberry.

Burberry encourages Partners to communicate where any potential conflict may arise between Burberry Impact Objectives and the MRSL implementation process.

All feedback shall be sent to project2020@burberry.com

9.0 REFERENCES

[Zero Discharge of Hazardous Chemicals \(ZDHC\) MRSL](#)

[Zero Discharge of Hazardous Chemicals \(ZDHC\) Roadmap](#)

[Burberry Corporate Responsibility Programme](#)

10.0 DEFINITIONS

CHEMICAL FORMULATION	A chemical substance or mixture of chemical substances
PARTNER	A company who directly and indirectly supplies Burberry with product
PPM	Parts Per Million, equivalent of mg/kg
MAXIMUM CONTAMINATION LIMIT	Substance should not be used as intentional ingredient but Burberry PLC does acknowledge end formulation might end up with unintentional contamination
CAS NUMBER	Unique numerical identifiers assigned by Chemical Abstracts Service to every chemical substance
ZDHC	Zero Discharge of Hazardous Chemicals, a group of major apparel and footwear brands and retailers who made a shared commitment to help lead the industry towards zero discharge of hazardous chemicals by 2020
RAW MATERIAL AND TRIMS SUPPLIER	Any company who supplies goods or a service to Burberry PLC directly or indirectly this includes but is not limited to weaving, knitting, dyeing, processing etc and excludes metal trims
UPSTREAM SUPPLIER	Any sub-supplier of Burberry product
FINISHED GOODS VENDORS	Any company who supplies Burberry with finished goods

11.0 APPENDIX 1

Chemical Supplier Statement of Compliance

Supplier: [CHEMICAL SUPPLIER COMPANY NAME]

Location: [COUNTRY]

Date: [XX.XX.XXXX]

To the attention of:

[PARTNER COMPANY NAME]

[Product A]

[Product A]

The above products do not intentionally contain any substances listed in the Burberry MRSL or ZDHC MRSL.

The substances listed in the Burberry MRSL or ZDHC MRSL are not used during the manufacture of the product or its component substances to provide the properties of the finished product.

They may be present as trace impurities below limits of the Burberry MRSL or ZDHC MRSL.

Yours sincerely,

[Name]

[Job Title]

[Company]

12.0 APPENDIX 2

[Partner] Chemical Management Policy

Supplier: [PARTNER COMPANY NAME]

Location: [COUNTRY]

Date: [XX.XX.XXXX]

[PARTNER ORGANISATION] are committed to the elimination of hazardous chemicals in all chemical formulations used in manufacturing processes associated with Burberry product.

We commit to the implementation of the Burberry MRSL and requirements outlined in the Burberry MRSL Guidance Document for all raw materials and chemical formulations associated with Burberry product.

This commitment extends to ensuring all chemical suppliers and upstream suppliers are meeting the minimum requirements of the Burberry MRSL.

We believe in the importance of eliminating these chemicals for the health of our employees, the environment and the public.

This document shall be reviewed annually as part of a Chemical Management Review.

Signed:

Date:

13.0 APPENDIX 3

Chemical Inventory Minimum Requirements	
Formulator Name	
Formulator Address (incl. production location)	
Formulation Name	
CAS Number (if applicable)	
Invoice Reference	
Delivery Date	
Net Unit (+unit measure)	
MSDS	
MRSL Compliant (incl. Version)	
Certification Type (if applicable)	
Shelf Life	
Intended Use Category	

14.0 APPENDIX 4

Burberry MRSL Implementation Feedback Form

Supplier: [PARTNER COMPANY NAME]

Location: [COUNTRY]

Date: [XX.XX.XXXX]

Issue	
Chemical Used	
CAS Number	
Chemical Supplier	
Process Chemical is Used	
Other Details	