

# SAFETY DATA SHEET

according to regulation (EC) No 1907/2006 (REACH) and 1272/2008/EC



Trade name: **Impu-Fix ribbon conductor bonding agent**

Version: 1      Date of issue/Latest revision:      Date of issue: 02. 06. 2023      Page: 1/(15)  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier:

**Impu-Fix ribbon conductor bonding agent**

UFI: V285-MF8Q-E426-PFRX

Article number: 2341018

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Adhesive. Consumer use.

Uses advised against: application other than the above.

### 1.3. Details of the supplier of the safety data sheet:

Distributor Details:

OBO Bettermann Produktion Deutschland GmbH & Co. KG

Hüingsers Ring 52, 58710 Menden (Sauerland), Germany

Tel.: +49 2373 890

Fax: +49 2373 89238

E-mail: info@obo.de

Responsible for SDS:

OBO Bettermann Produktion Deutschland GmbH & Co. KG

Hüingsers Ring 52, 58710 Menden (Sauerland), Germany

Tel.: +49 2373 890

Fax: +49 2373 89238

E-mail: info@obo.de

### 1.4. Emergency telephone number

REACH Registration of Chemicals GmbH

Tel.: +49 (0)700 24112112 (OBO)

Tel.: +1 872 5888271 (OBO)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Hazard Class and Category:	Hazard statement:
Flam. Liq. 2	H225 Highly flammable liquid and vapour.
Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2	H319 Causes serious eye irritation.
STOT SE 3	H336 May cause drowsiness or dizziness.
Aquatic Chronic 2	H411 Toxic to aquatic life with long lasting effects.

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## 2.2. Label elements

Product identification: Trade name: **Impu-Fix ribbon conductor bonding agent**

Hazardous components: Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, >5%; n-hexane; Butanone; Ethyl acetate.

GHS Pictogram:



Signal word:

**Danger**

Hazard statement:

**H225** Highly flammable liquid and vapour.

**H315** Causes skin irritation.

**H319** Causes serious eye irritation.

**H336** May cause drowsiness or dizziness.

**H411** Toxic to aquatic life with long lasting effects.

Supplemental hazard information: -

**EUH208** Contains Rosin (colophony) and Dodecane-1-thiol. May produce an allergic reaction.

Precautionary statements – General:

**P101** If medical advice is needed, have product container or label at hand.

Precautionary statements – Prevention:

**P210** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**P233** Keep container tightly closed.

**P261** Avoid breathing mist, vapours.

**P271** Use only outdoors or in a well-ventilated area.

**P273** Avoid release to the environment.

**P280** Wear protective gloves, eye protection.

Precautionary statements – Response:

**P370 + P378** In case of fire: Use foam or dry chemical powder to extinguish.

**P391** Collect spillage.

Precautionary statements – Storage:

**P405** Store locked up.

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Precautionary statements – Disposal:

**P501**      Dispose of contents/container in accordance with national regulation.

Other liabilities for labelling:

Tactile warning of danger:      Required for retail distribution.

Child-resistant fastening:      Not required.

Transport classification: see section 14.

## 2.3. Other hazards

The product does not contain any PBT or vPvB substance according to annex XIII of regulation (EC) 1907/2006, at a concentration of 0.1% or more.

The product does not contain any substance with endocrine disrupting properties, at a concentration of 0.1% or more.

## SECTION 3:      Composition/information on ingredients

### 3.2. Mixtures

Chemical description:      Mixtures of the following substances and non-hazardous substances.

Component(s) / Hazardous component(s):

Name	EC number	CAS number	Hazard classes and cat.	Hazard statements	Conc. % (m/m)
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, >5% n-hexane REACH Registr. Nr.: 01-2119475514-35	921-024-6	-	Flam. Liq. 2 Asp. Tox. 1 Skin Irrit. 2 STOT SE 3 Aquatic Chronic 2	H225 H304 H315 H336 H411	≥25 - <30
Butanone REACH Registr. Nr.: 01-2119457290-43	201-159-0	78-93-3	Flam. Liq. 2 Eye Irrit. 2 STOT SE 3	H225 H319 H336 EUH066	≥20 - <30
Ethyl acetate* REACH Registr. Nr.: 01-2119475103-46	205-500-4	141-78-6	Flam. Liq. 2 Eye Irrit. 2 STOT SE 3	H225 H319 H336 EUH066	≥10 - <20
Rosin (colophony) REACH Registr. Nr.: 01-2119480418-32	232-475-7	8050-09-7	Skin Sens. 1 Aquatic Chronic 2	H317 H411	0,25 - <1

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Name	EC number	CAS number	Hazard classes and cat.	Hazard statements	Conc. % (m/m)
n-Hexane*,** REACH Registr. Nr.: 01-2119480412-44	203-777-6	110-54-3	Flam. Liq. 2 Asp. Tox. 1 Eye Irrit. 2 STOT SE 3 Repr. 2 STOT RE 2 Aquatic Chronic 2	H225 H304 H315 H336 H361f H373 H411	0,25 - <1
Zinc oxide* REACH Registr. Nr.: 01-2119463881-32	215-222-5	1314-13-2	Aquatic Acute 1 Aquatic Chronic 1	H400 (M=1) H410 (M=1)	0,25 - <1
2,6-di-tert-butyl-p-cresol REACH Registr. Nr.: 01-2119565113-46	204-881-4	128-37-0	Aquatic Acute 1 Aquatic Chronic 1	H400 (M=1) H410 (M=1)	0,1 - <0,25
Dodecane-1-thiol REACH Registr. Nr.: no data	203-984-1	112-55-0	Skin Corr. 1C Skin Sens. 1A Eye Dam. 1 Aquatic Acute 1 Aquatic Chronic 1	H314 H317 H318 H400 (M=10) H410 (M=10)	<0,1

\*: with exposure limit

\*\*Specific concentration limit: STOT RE 2; H373: C  $\geq$  5 %

The full text of each relevant H- phrase and Hazard classes and cat. see in Section 16.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

General information: Never give anything by mouth to an unconscious person, or never induce vomiting.

Inhalation: Remove the affected person to fresh air. If rapid recovery does not occur, obtain medical attention. If necessary perform the artificial respiration. If unconscious, place in recovery position.

Skin contact: Remove contaminated clothing. Wash skin with large amounts of water, use soap. Do not use solvents! In case of persistent irritation, get medical attention.

Eye contact: Flush eyes with plenty of water for 10-15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of persistent irritation, get medical attention.

Ingestion: DO NOT induce vomiting. Rinse mouth thoroughly with water and give the injured person some water to drink. Get prompt medical attention.

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Protection of first-aid person: No individual specifications.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms may even occur after several hours.

May produce an allergic reaction.

Causes skin irritation.

Causes serious eye irritation.

May cause drowsiness or dizziness.

4.3. Indication of any immediate medical attention and special treatment needed

In cases of doubt or in case of feeling unwell, consult a doctor.

## SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Carbon dioxide, foam, dry chemical powder, water spray.

Unsuitable extinguishing media:

Full water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products:

On burning, carbon dioxide, carbon monoxide and other toxic fumes / gases can be formed.

5.3. Advice for fire-fighters

Special protective equipment:

According to the existing fire-fighting regulations. Respiratory protection.

Further information:

Vapours can form flammable/explosive vapour-air mixtures.

Collect contaminated fire-fighting water separately. It must not enter the sewage system.

Contaminated extinguishing water must be disposed of in accordance with official regulations.

## SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: see Section 8.

Keep persons not involved in rescue at a distance.

Sufficient ventilation should be provided.

Keep away from sources of ignition – No smoking.

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## 6.2. Environmental precautions:

Confine spills to prevent material from entering sewers, watercourses, drains and into soil  
Notify relevant authority.

## 6.3. Methods and material for containment and cleaning up

On soil: Confine spills to prevent material from entering sewers, watercourses, drains and into soil.  
All kind of ignition sources should be removed. Recover free liquid by pumping. Contain the rest or small quantities with non-combustible liquid-absorbent material (sand, silica gel, acid binder, universal liquid binder). Place in properly labelled closed container. Dispose of according to local regulations.  
The contaminated area must be cleaned up immediately.

## 6.4. Reference to other sections

Personal precautions: see section 8.

Waste treatment methods: see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Keep general measures applied for normal operations with chemicals and flammable liquids.  
Adequate ventilation must be provided.  
Keep away from radiant heat and open flame.  
Avoid dust and aerosol formation.  
Use explosion-proof equipment.  
Avoid to accumulate electrostatic charge.  
A conductive floor is required in the storage room. The storage tank must not be emptied under pressure.  
Vapours can form flammable/explosive vapour-air mixtures.  
Avoid contact with skin and eyes. Avoid prolonged breathing of vapours.  
Wash hands before breaks and at end of work.  
Take off contaminated clothing and wash it before reuse.  
When using do not eat, drink or smoke. Avoid splashing the product.  
Handling temperature: no data.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage facilities must comply with regulations for storing of flammable liquids.  
Store in dry, cool well-ventilated place in original, closed containers.

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Keep away from direct sunshine, direct heat or ignition sources, from strong acids, strong alkalis and oxidizing agents.

Keep away from food, drink and feed.

Keep out of reach of children.

Storage temperature: no data.

## 7.3. Specific end use(s)

Adhesive.

## SECTION 8: Exposure controls / personal protection

### 8.1. Control parameters:

Substance	CAS number	Occupational Exposure Limit Value (8-hour reference period)		Occupational Exposure Limit Value (15-minute reference period)		Notes
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	
<i>Methyl ethyl ketone (MEK)</i>	78-93-3	200	600	300	900	Sk, IOELV
<i>Ethyl acetate</i>	141-78-6	200	734	400	1468	IOELV
<i>n-Hexane</i>	110-54-3	20	72	-	-	IOELV, Sk
<i>2,6-Ditertiary-butyl-para-cresol</i>	128-37-0	-	2	-	-	-

### 8.2. Exposure controls

Engineering control measures:

Adequate ventilation (general or local exhaust, explosion-proof).

Personal protection:

(a) Eye/face protection

Tightly fitting safety goggles (EN 166).

(b) Skin protection

(i) Hand protection

Chemical resistant gloves (EN 374)

For prolonged contact: gloves with strong mechanical protection.  
Breakthrough time: 480 min.

For short-term contact:

Material: butyl. Breakthrough time 15 min., Layer thickness: 0,7 mm.

Material: nitril. Layer thickness: 0,12 mm.

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- Note: Manufacturer's directions for use and the conditions of application should be observed.
- (ii) Other Protective clothing.
- (c) Respiratory protection Under normal conditions not required. In case of exceeded exposure-limits respiratory protection with particle-filter is recommended.
- (d) Thermal hazards No data.
- Environmental exposure controls:  
Do not discharge into drains/surface waters/groundwater.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

- |  |  |
|--|--|
| a) Physical state:   | liquid   |
| b) Colour:   | brown  |
| c) Odour:  | not available  |
| d) Melting point/freezing point (Pour point):                | not available  |
| e) Boiling point or initial boiling point and boiling range: | 77°C   |
| f) Flammability:   | Highly flammable liquid and vapour.  |
| g) Lower and upper explosion limit:                          | Non-explosive, but the formation of an explosive gas/vapour/air mixture is possible. |
| h) Flash point:  | -19°C  |
| i) Auto-ignition temperature:                                | not available  |
| j) Decomposition temperature:                                | not available  |
| k) pH:   | not available  |
| l) Kinematic viscosity                                       |  |
| at 40°C:   | > 20,5 mm <sup>2</sup> /s  |
| at 100°C:  | not available  |
| m) Solubility  |  |
| Solubility in water:   | not soluble, or only slightly soluble in water                                       |
| Solubility in other solvents:                                | not available  |
| n) Partition coefficient n-octanol/water (log value):        | not available  |
| o) Vapour pressure at 20°C:                                  | 160 hPa  |
| p) Density and/or relative density:                          | 0.875 g/cm <sup>3</sup>  |



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q) Relative vapour density:      not available  
r) Particle characteristics:      not available

9.2. Other information  
not available

## SECTION 10: Stability and reactivity

10.1. Reactivity      Dangerous reactivity not known.  
10.2. Chemical stability      No decomposition if stored and handled properly.  
10.3. Possibility of hazardous reactions      It emits highly flammable vapours.  
10.4. Conditions to avoid      Heating, ignition source.  
10.5. Incompatible materials      Acids, alkalis, strong oxidising agents.  
10.6. Hazardous decomposition products      No dangerous decomposition products are formed under normal conditions. Hazardous combustion products: See Section 5.

## SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity:      Based on available data, the classification criteria are not met.

Components:

*Ethyl acetate (CAS: 141-78-6)*

Oral:	LD <sub>50</sub> (rat)	5620 mg/kg
Dermal:	LD <sub>50</sub> (rabbit)	> 20000 mg/kg
Inhalation:	LC <sub>50</sub> (rat)	22.5 mg/L (4 h)

*n-Hexane (CAS: 110-54-3)*

Dermal:	LD <sub>50</sub> (rabbit)	3000 mg/kg
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*2,6-Di-tert-butyl-p-cresol (CAS: 128-37-0)*

Oral:	LD <sub>50</sub> (rat)	6000 mg/kg
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Skin corrosion/irritation:      Causes skin irritation.  
Serious eye damage/irritation:      Causes serious eye irritation.  
Respiratory or skin sensitisation:      Based on available data, the classification criteria are not met.  
Germ cell mutagenicity:      Based on available data, the classification criteria are not met.  
Carcinogenicity:      Based on available data, the classification criteria are not met.

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Reproductive toxicity:      Based on available data, the classification criteria are not met.  
STOT-single exposure:      May cause drowsiness or dizziness.  
STOT-repeated exposure:      Based on available data, the classification criteria are not met.  
Aspiration hazard:      Based on available data, the classification criteria are not met.

## 11.2. Information on other hazards

The product does not contain any substance with endocrine disrupting properties, at a concentration of 0.1% or more.

## SECTION 12: Ecological information

12.1. Toxicity      Toxic to aquatic life with long lasting effects.

Components:

*Ethyl acetate (CAS: 141-78-6)*

Fish (*Pimephales promelas*):      LC<sub>50</sub>      220 - 250 mg/L (96 h) (flow test)

*Rosin (colophony) (CAS: 8050-09-7)*

Daphnia (*Daphnia magna*):      EC<sub>50</sub>      3.8 – 5.4 mg/L (48 h) (static test)

*n-Hexane (CAS: 110-54-3)*

Fish (*Pimephales promelas*):      LC<sub>50</sub>      2.1 – 2.98 mg/L (96 h) (flow test)

*2,6-Di-tert-butyl-p-cresol (CAS: 128-37-0)*

Fish (*Oryzias latipes*):      LC<sub>50</sub>      5 mg/L (48 h) (static test)

Algae (*Desmodesmus subspicatus*):      EC<sub>50</sub>      > 0.42 mg/L (72 h) (flow test)

12.2. Persistence and degradability      No data for the product.

12.3. Bioaccumulative potential      No data for the product.

12.4. Mobility in soil      No data available.

Mobility in water      No data available.

12.5. Results of PBT and vPvB assessment      Does not contain PBT and vPvB substances, at a concentration of 0.1% or more.

12.6. Endocrine disrupting properties      The product does not contain any substance with endocrine disrupting properties, at a concentration of 0.1% or more.

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12.7. Other adverse effects

Water hazard class (German):

Large spills may be hazardous to the environment.

WGK 2 (Classification by AwSV)

## SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Wastes of the product or used oil should be treated as hazardous waste.

Waste Identification Code: 08 04 09\*

Waste adhesives and sealants containing organic solvents or other dangerous substances.

Waste Identification Code: 08 01 11\*

Waste paint and varnish containing organic solvents or other dangerous substances.

Disposal must be in compliance with national and local regulations.

Packaging disposal:

Containers with product residue should also be treated as hazardous waste according to national and local disposal regulations.

Waste Identification Code: 15 01 01

Paper and cardboard packaging.

Waste Identification Code: 15 01 02

Plastic packaging.

Waste Identification Code: 15 01 04

Metallic packaging.

Waste Identification Code: 15 01 10\*

Packaging containing residues of or contaminated by dangerous substances.

Disposal must be in compliance with national and local regulations.

Wastewater:

Quality of wastewater emitted to natural water must comply with national and local regulations.

Care should be taken in any case to ensure compliance with EC, national and local regulations.

It is the responsibility of the user to know all relevant national and local regulations.

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## SECTION 14: Transport information

Land transport:

Road/ Railway

ADR/RID:

14.1. UN number or ID number	1133
14.2. UN proper shipping name	ADHESIVES containing flammable liquid (Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, >5% n-hexane)
14.3. Transport hazard class(es)	3
Classification code:	F1
14.4. Packing group	II
Labels:	3
14.5. Environmental hazards	dangerous for the environment
Marine pollutant	yes
14.6. Special precautions for user	
Limited quantities:	5L
Excepted quantities:	E2
Transport category:	2
Tunnel restriction code:	D/E
Hazard identification No.:	33
EmS:	F-E, S-D
14.7. Maritime transport in bulk according to IMO instruments	Not applicable.

## SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture  
This safety data sheet has been prepared according to Regulation (EC) No 1907/2006 (mod.: 2020/878/EU) and to Regulation (EC) 1272/2008.  
Seveso category: P5.c, E2.
- 15.2. Chemical safety assessment.  
not available

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## SECTION 16: Other information

The information given in this data sheet is based on our best knowledge at the time of publication. The information is related only to this product and is intended to assist its safe transport, handling and use. The given physical and chemical parameters describe the product only for the purpose of safety requirements and therefore should not be construed as guaranteeing any specific property of the product or as being part of a product specification or any contract.

The manufacturer or supplier shall not take responsibility for any damages from the use other than recommended or other misuse of the product. It is the responsibility of the user to keep regulatory precautions and observe recommendations for safe use of the product.

Classification for mixtures and used evaluation method according to regulation (EC) 1272/2008 (CLP)

Flam. Liq. 2	H225	flashpoint test
Skin Irrit. 2.	H315	calculated
Eye Irrit. 2	H319	calculated
STOT SE 3	H336	calculated
Aquatic Chronic 3	H411	calculated

*The full text of each relevant H- phrase and Hazard classes and cat. in Section 3.:*

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

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Asp. Tox. 1	Aspiration hazard Category 1
Flam. Liq. 2	Flammable liquid Category 2
Skin Corr. 1C	Skin corrosion/irritation Category 1C
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1; 1A	Respiratory/skin sensitization Category 1, 1A
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
STOT SE 3	Specific target organ toxicity — single exposure Category 3
Repr. 2	Reproductive toxicity Category 2
STOT RE 2	Specific target organ toxicity – repeated exposure Category 2
Aquatic Acute 1	Hazardous to the aquatic environment, Acute Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, Chronic Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, Chronic Category 2

## Legend:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration Factor
BOD	Biological Oxygen Demand
Bw	Body Weight
C&L	Classification and Labelling
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	Carcinogenic, Mutagenic or toxic to Reproduction
COD	Chemical Oxygen Demand
CSA	Chemical Safety Assessment
CSR	Chemical Safety Report
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
ECHA	European Chemicals Agency
Ex	Effective Concentration x%
ErC50	EC50 in terms of reduction of growth rate
Edx	Effective Dose x%
EC	European Community
EC number	European Community number
ELINCS	European List of Notified Chemical Substances
ES	Exposure Scenario
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association

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IMDC	International Maritime Dangerous Goods
LCx	Lethal Concentration x%
LDx	Lethal Dose x%
LOAEC	Lowest Observed Adverse Effect Concentration
LOAEL	Lowest Observed Adverse Effect Level
LOEC	Lowest Observed Effect Concentration
LOEL	Lowest Observed Effect Level
NOEC	No observed effect concentration
NOEL	No observed effect level
NLP	No-Longer Polymer
NOAEL	No Observed Adverse Effect Level
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	parts/million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International carriage of Dangerous Goods by Rail
SVHC	Substance of Very High Concern
UVCB	substance of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bio-accumulative

## Revision Indicators:

Section	Subject of change	Date	Version