

## Restricted Products

Item	Group	Chemical Substance	CAS Number	Reference of use	Technical Reference	Requirement
1	Aliphatic Halogenated	Methyl bromide	74-83-9	Pesticide Herbicide applied to the soil to control weeds Wood and seeds preservative		HSE
2	Antibacterial	Triclosan	3380-34-5	Application in the pharmaceutical industry to produce various medicines and personal care products		HSE
3	Azo-compounds (dye)	Azo dyes	92-67-1 92-87-5 95-69-2 91-59-8 97-56-3 99-55-8 106-47-8 615-05-4 101-77-9 91-94-1 119-90-4 119-93-7 838-88-0 120-71-8 101-14-4 101-80-4 139-65-1 95-53-4 95-80-7 137-17-7 90-04-0 60-09-3	Industrial Applicability for the production of inks, dyes and pigments	Directive 1.907/2006/EU	HSE
4	Alkanes	Chlorinated paraffins	085535-85-9	Lubricating oil for cutting Plasticizer, plastics, paints, sealants and rubbers	Directive 1.907/2006/EU	HSE
		Isobutane	75-28-5	Industrial refrigeration		HSE
5	Ariloxialcanoic acid and pyridinecarboxylic acid	Acrylonitrile	107-13-1	Industrial use as an additive in dyes It is used in the manufacture of resins such as acrylonitrile-butadiene-styrene, plastics, acrylic fibers and nitrile rubber	Directive 1.907/2006/EU	HSE
6	Carbamates	Carbaryl	63-25-2	Pesticide		HSE

Item	Group	Chemical Substance	CAS Number	Reference of use	Technical Reference	Requirement
7	Ethers	Polybrominated bi-phenyl (PBB) including hexabromobisfenil (HBB)	67774-32-7	Flame retardant (mainly plastics)	Directive 60/2006/EU	HSE
		Polybrominated diphenyl ethers (PBDE) Tetra BDE Penta BDE Penta BDE (commercial mixtures)	40088-47-9 5436-43-1 32534-81-9 60348-60-9			
		Polybrominated Diphenyl Ethers (PBDE) Hexa BDE Hepta BDE Octa BDE Nona BDE Deca BDE Octa BDE (commercial mixtures)	36483-60-0 68631-49-2 207122-15-4 68928-80-3 446255-22-7 207122-16-5 32536-52-0 63936-56-1 1163-19-5			
8	Esters	Dimethyl fumarate (DMF)	624-49-7	Pesticide for use in agriculture to control fungi, particularly in onion seed protection, soybeans and wheat  Drying agent and preservative of wood and seeds	Directive 251/2209/EU	HSE
9	Esters of phthalic acid (phthalates)	Dibutylphthalate (DBP)	84-74-2	Plasticids in Adhesive PVC Use in industries in the manufacture of paints	Directive 1.907/2006/EU	HSE
		Hexilftalato Diethylphthalate (DEHP)	82208-43-3			
		Butilbenzal phthalate (BBP)	85-68-7			
		Diisodecyl phthalate (DIDP) diisononyl phthalate (DINP) Di-n-octyl phthalate (DNOP)	26761-40-0 28553-12-0 117-84-0	Industrial application, used as an additive in the manufacture of plastics, adhesives, sealants and paints	Directive 1.907/2006/EU	HSE
10	Fluorocarbons	Perfluorinated carbons (PFCs) Perfluoromethane, perfluoretane, perfluoropropane, perfluorobutane, perfluorocyclobutane and perfluoropentane	678-26-2 382-28-5 355-42-0 335-57-9 307-34-6 338-84-1 143356-32-5	Production of fluorinated polymers, coatings for food packaging and components of firefighting foams  Surfactant in polymerization in emulsion of fluoropolymers  Used in textile and leather as a preservative  Used as additive for coatings	Directive 842/2006/EU	HSE
		Sulfur hexafluoride (SF6)	02551-62-4	Production of fluorinated polymers  Insulation of high voltage equipment (substations)		HSE

Item	Group	Chemical Substance	CAS Number	Reference of use	Technical Reference	Requirement
		Hydrofluorocarbon (HFCs)	75-46-7 75-10-5 593-53-3 138495-42-8 354-33-6 359-35-3 811-97-2 430-66-0 420-46-2 624-72-6 75-37-6 353-36-6 431-89-0 677-56-5 431-63-0 679-86-7 460-73-1 406-58-6	Industrial use for cooling (cooling gases) Industrial application for the production of organic solvents, fire extinguishers and foam, insulators (extruded polystyrene) Aerosol package (sprays)	Directive 842/2006/EU	HSE
11	Formamidines	Amitraz	33089-61-1	Pesticide		HSE
12	Metals	Mercury and its compounds	7439-97-6	Industrial applications in instrumentation (automation), electronic equipment and fluorescent lamps Wood preservative (anti-fouling), vaccines, cosmetics, bleaching soaps and agrochemicals Some inorganic salts and some organomercury compounds have biocidal, anti-septic and fungicide activity	Directive 1.907/2006/EU	HSE
		Nickel and its compounds	7440-02-0 7718-54-9 10028-18-9 13462-88-9 7786-81-4	Industrial application in instrumentation, various electronic devices and batteries Protection of metal parts (oxidation resistance), special steel (stainless steel)		HSE
		Cadmium and its compounds	7440-43-9	Batteries, electrical and electronic equipment Anti-corrosion coating on metal structures		HSE
		Lead	7439-92-1	Batteries, electrical and electronic equipment Gasoline additive to improve the octane Industrial application, especially in boiler Naval painting	Directive 1.907/2006/EU	HSE
		Arsenic and compounds	7440-38-2	Electronic equipment Insecticide Leather and wood preservative	Directive 1.907/2006/EU	HSE
		Beryllium and compounds	7440-41-7	Electronic equipment Metallic alloys Nuclear reactors	Directive 1.907/2006/EU	HSE

Item	Group	Chemical Substance	CAS Number	Reference of use	Technical Reference	Requirement
		Hexavalent chromium	18540-29-9	Pigment in inks Plastic Leather tanning Metallurgy, stainless steel, protection of metal parts (oxidation resistance) Wood preservation	Directive 95/2002/EU	HSE
13	Polybrominated diphenyl ethers	Hexabromocyclododecane	25637-99-4	Flame retardant in textiles, plastics, foams and expanded polystyrene (styrofoam)	Directive 1.907/2006/EU	HSE
		Alpha-hexabromocyclododecane	134237-50-6			
		Beta-hexabromocyclododecane	134237-51-7			
		Gamma-hexabromocyclododecane	134237-52-8			
14	Organophosphates	Azinphos-methyl	86-50-0	Pesticide	Directive 414/1991/EU	HSE
15	Organosulfur	Perfluoroalkyl-octanesulfonic acid (PFOS) PFOS potassium salt PFOS ammonium salt PFOS lithium salt PFOS diethanolamine salt Perfluoro-octane sulfonyl fluoride (PFOSF)	1763-23-1	Pesticide used in textiles and leather, firefighting foams, metal plating, additives for coatings	Regulation 2006/122/ECOF	HSE
16	Organotin	Bis-tributyltin oxide and compounds	56-35-9	Industrial application as a stabilizer in anti-fouling paints	Directive 1.907/2006/EU	HSE
17	Phenols	Alkyl phenol ethoxylates (especially octylphenol and nonylphenol - EPA)		Industrial applicability used as an additive in the manufacture of plastics, adhesives and various cleaning materials	Directive 1.907/2006/EU	HSE
		Bisphenol A (BPA)	80-05-7	Industrial application in the production of polycarbonates, epoxy resin and flame retardants		HSE
18	Volatile Organic Compounds (VOCs) and solvents	Benzene	71-43-2	Industrial solvent for paints, glues and varnishes Raw material for the production of nylon and polystyrene	Directive 1.907/2006/EU	HSE
		1.1 Dichloroethylene (vinyl chloride)	75-35-4	Industrial application in the production of resins, adhesives, refrigerants, synthetic fibers Application in the pharmaceutical industry in the production of cosmetics, especially in aiding collagen replacement	Directive 1.976/768/EU	HSE

# Chemicals Management

## Annex 2 – Restricted List



PGS-003038, Rev.: 02-07/29/2021

Item	Group	Chemical Substance	CAS Number	Reference of use	Technical Reference	Requirement
		Formaldehyde	50-00-0	Industrial applicability for the production of resins Application in the pharmaceutical industry in the production of cosmetics Binder resin used in industrial wood (MDF, MDP, OSB etc.)	Directiva 90/394/CE	HSE
		Methylene chloride	75-09-2	Solvent for the production of special lacquers and lacquer Propellant aerosol and plastic foam	Directive 1.976/768/EU	HSE
		Perchloroethylene	127-18-4	Industrial applicability for the production of cleansing agents Degreasing solvent	Stockholm Convention	HSE
		Toluene	108-88-3	Industrial solvent for the production of rubber, paints, coatings and oils Polymer production in common use, such as nylon, plastics and bottles	Directive 1.907/2006/EU	HSE
		Trichloroethylene	79-01-6	Commonly used as an industrial solvent and primarily for degreasing metal parts, yet also as an ingredient in adhesives, liquids, paint removal liquids.	Top 10 Health Hazards to have exposure reduced by 2025 (HSOR Strategy)	HS

