



## LIST OF COMMON SOLVENT USES MATCHED TO ESIG Generic Exposure Scenario (GES) TITLE WITH EXAMPLES OF RELEVANT SOLVENT TYPES

GES (Use) TITLE (alphabetical)	GES Number	END-USE APPLICATIONS	EXAMPLES (not an exhaustive list)	EXAMPLE HYDROCARBON SOLVENTS CATEGORIES TYPICALLY RELEVANT FOR USE (not an exhaustive list: see Note 1)	EXAMPLE OXYGENATED SOLVENTS CATEGORIES TYPICALLY RELEVANT FOR USE (not an exhaustive list: see Note 1)
Use in Agrochemicals	11	Biocidal protection products	E.g. Carriers, co-solvents, Coupling agents, emulsifiers in plant protection products, pesticide/ insecticide formulations,	1, 2, 7, 8, 9	Ketones; Alcohols; Glycol ethers/esters
		Insecticides	E.g. Carriers, co-solvents, coupling agents, emulsifiers in plant protection products, pesticide-, insecticide formulations,	7, 8	Ketones; Alcohols; Glycol ethers/esters
		Plant protection products	E.g. Carriers, co-solvents, coupling agents, emulsifiers in plant protection products, pesticide/ insecticide formulations	1, 2, 7, 8, 9	Ketones; Alcohols
Use as Binders and release agents	10	Foundry mould release products	E.g. Anti-set-off, anti-adhesive or release agents for foundry purposes (solvents for coatings applied to (sand) moulds	1, 2, 6, 7, 8, 9	Ketones; Alcohols
		Mould release agents	E.g. Anti-set-off, anti-adhesive or release agents, e.g. concrete release agents	1, 2, 6, 7, 8, 9	Alcohols
Blowing agents	9	Blowing agents	E.g. Blowing agents in manufacture of e.g. polystyrene	5	Ketones
Use in Cleaning Agents	4	Cleaning products	E.g. Substance used in detergents, metal (parts) cleaners, electronic cleaners, laundry cleaners, degreasers etc.	7, 8	Ketones; Alcohols; Glycol ethers/esters
		Degreasing formulations	E.g. Substances used in Engine (parts) cleaning, brake cleaning, metal degreasing formulations	6, 7, 8	Ketones; Alcohols; Glycol ethers/esters
		Dry cleaning formulations	E.g. Solvents in dry-cleaning formulations	8	n/a
		Solder flux removal products	E.g. Electronic parts cleaners	6, 7, 8	Ketones; Alcohols; Glycol ethers/esters
Uses in Coatings	3	Wipes	E.g. Wipes for cleaning purposes	7, 8 Toluene, Xylene	Ketones; Alcohols; Glycol ethers/esters
		Adhesives	E.g. Solvents, fillers, plasticisers, emulsifiers, dispersants in e.g. adhesives	1, 2, 6, 7, 8, 9	Ketones; Glycol ethers/esters
		Inks	E.g. Carriers for all types of water and solventborne inks.	1, 2, 7, 8, 9	Glycol ethers/esters
		Metal surface treatment products	E.g. Anti-corrosion-protection oils, other surface treatment products, temporary coatings	8, 9	n/a
		Non-metal surface treatment products	E.g. Anti-corrosion-, protection oils, other surface treatment products, temporary coatings wood protection oils, parquet oils	8, 9	n/a
		Paint removal products	E.g. Carriers in paint stripper formulations	1, 2	Ketones; Glycol ethers/esters
		Paints	E.g. Substances used in Bitumen linings or lacquers, paints, inks, stains, varnish, primers	1, 2, 3, 6, 7, 8, 9	Ketones; Alcohols; Glycol ethers/esters
		Plastisols	E.g. PVC plastisols for wallpaper, coatings for construction materials	8	n/a
		Parquet oils	E.g. Coalescence, carrier, emulsifiers, dispersants for all types of Parquet oils	8	n/a
		Polish & wax blends	E.g. Carriers emulsifiers, dispersants in shoe polish, car wax, floor and furniture polishes, other surface treatment products	1, 2, 7, 8	Alcohols; Glycol ethers
		Putties	E.g. Carriers, fillers, plasticisers, emulsifiers, dispersants in sealants / putties	8, 9	Ketones; Glycol ether esters
		Sealants	E.g. Carriers, fillers, plasticisers, emulsifiers, dispersants in sealants / putties	8, 9	n/a
Thinners	E.g. Carriers in thinners	1, 2, 6, 7, 8	Ketones; Alcohols;		
Wood protection oils	E.g. Teak oils, outdoor garden furniture treatment products, parquet oils	8	n/a		
De-icing and anti-icing applications	14	De-icing products	E.g. Substances used in de-icing products for aviation, vehicles, conveyor belts, coal industry	n/a	Alcohols; Glycol ethers
Formulation & (re) packing of solvent based mixtures	2	Inclusion of solvents as a component in mixtures/formulations	E.g. Blending of substances in solvents, also relevant for end use applications such as 'denaturants', and use in production of animal food and fodder.	All Hydrocarbon solvents	All Chemical solvents All Glycol ethers/esters
Use in Fuels	12	Catalytic lamp oils	E.g. Formulations that are combusted catalytically, Fragrance lamp oils, Perfume lamp oils,	n/a	Alcohols
		Fuel additives	E.g. Carriers, dispersants used in fuel formulations	1, 2, 8	Ketones; Alcohols
		Fuels	E.g. Barbeques oils, Lamp oils, fire gels, lighter fluids, heater oils, acetylene solvent	8	Ketones; Alcohols
Functional Fluids	13	Brake fluids	E.g. Brake fluids for automotive vehicles	n/a	Glycol ethers
		Coolants	E.g. Industrial heat exchangers, automotive	8	n/a
		Heat transfer fluids	E.g. Industrial heat exchangers, refrigerants, air conditioners	5, 8	n/a
		Hydraulic fluids	E.g. as blend component in all kinds of hydraulic installations	8	Ketones; Glycol ethers/esters
Use in Laboratories	17	Refrigerants	E.g. Refrigerants, air conditioners	5	n/a
		Laboratory chemicals	E.g. General use of substance as laboratory chemical, glass rinsing/cleaning	Various hydrocarbon solvents, mostly pentane, heptane, toluene	Ketones; Alcohols
Lubricants	6	Lubricant formulations	E.g. Carriers and solvents in all types of lubricating oils, e.g. engine oils, greases, metal working fluids (or: Use of HCS as carriers for additives used in the manufacture of finished lubricants.)	1, 2, 5, 8, 9	Alcohols
Manufacture (including use as a Process Chemical or Extraction Solvent)	1	Catalyst deactivator, deashing agents	Process chemical e.g. agents, to inhibit reaction progress	n/a	Alcohols
		Dampening agent	E.g. Alcohols in nitrocellulose formulations	n/a	Alcohols
		Explosives (nitrocellulose)	Process chemical e.g. Dampening agents, in extrudate processes	n/a	Ketones; Alcohols; Glycol ethers/esters
		Inhibitor	Process chemical, e.g. solvents, to inhibit reaction progress	n/a	Alcohols
		Intermediates	Intermediate e.g. for the production of e.g. bulk chemicals, fine chemicals, pharmaceuticals, fragrances, dyes etc.	1, 2	Ketones; Alcohols; Glycol ethers/esters
		Lub oil dewaxing	Extraction agent, e.g. to extract wax / paraffins from mineral oils, crude oils	n/a	Ketones
		Photo chemicals manufacture	Process chemical e.g. for the production of toner, photo copy solvents	n/a	Ketones; Alcohols
		Photographic film manufacture	Process chemical e.g. for the manufacture of cellulose acetate or other resin bases	n/a	Ketones; Alcohols
		Pigment manufacture	Process chemical, e.g. dispersion agents, carriers, grinding aids, metal pastes	1, 2, 7, 8	Alcohols; Glycol ethers
		Polymerisation processes	Process chemical, e.g. process aids catalyst carrier, reaction media, reaction inhibitor, catalyst deactivators, intermediate in polymerisation processes	5, 6, 8, 9	Alcohols
		Chemical manufacture	E.g. production of hydrogen peroxide	1, 2	n/a
Resin manufacture	Process chemical e.g. in resin manufacturing process	1, 2, 8	Ketones; Alcohols; Glycol ethers/esters		
Extraction	6, 7	Extraction agents for use in production of e.g. seed oil, fragrances, proteins, caffeine and others.	6, 7	MEK, MIBK, Acetone, IPA	
		Metal working fluids / rolling oils	7	Metal working fluids	E.g. Carriers, lubricating agents in metal working oils, rolling oils, cutting oils quenching oil formulations, metal surface treatment products
Mining Chemicals	22	Metal solvent extraction	E.g. Diluent in metal solvent extraction processes	2, 6, 7, 8, 9	Ketones
		Flotation	E.g. Flotation frother	n/a	Ketones; Glycol ethers
Use in Oil and gas field drilling and production operations	5	Drilling and fracturing operations	E.g. Base fluids, emulsifiers, shale inhibitors, other additives in drilling muds.	8, 9	Ketones; Glycol ethers
		Oilfield chemicals	E.g. Base fluids, well treatment products, shale inhibitors, lubricants, asphaltene inhibitors, demulsifiers	1, 2, 8	Ketones; Alcohols; Glycol ethers
Road and Construction operations	15	Bitumen Road repair, roofing	E.g. Carriers for bitumen emulsions / solutions	1, 2	n/a
Rubber Production and Processing	19	Rubber processing aids	Process chemical e.g. Compounding aids	3, 6, 7, 8, 9	n/a
Polymer Processing	23	Polymer processing aids	Process chemical e.g. Compounding aids	1, 2, 3, 4, 6, 7, 8, 9	n/a
Water treatment chemicals	21	Flocculant formulations	E.g. Carriers in flocculant formulations	1, 2, 8, 9	n/a

**Note 1:** These are examples of the solvent categories typically relevant for the identified applications and covered by each GES Title. Refer to your supplier for the names of specific solvents that are appropriate for each application. You may also review the list of Use Titles included within the REACH Registration for specific solvents via the ECHA Dissemination Portal (<http://echa.europa.eu/information-on-chemicals/registered-substances>)