

Instructions for preparing the special risk assessments required for use of base baths and holding excess solvents using CHARM

Base Baths

All personnel planning to make use of a base bath must complete a risk assessment. These can be either individual with just one worker or group assessments including several workers. Before starting to prepare this read the information in section 8.2 of the Safety Handbook.

1. All base baths must be sited in one of the fail-safe metal fire-extinguishing boxes. For location of work enter the room where it is situated.
2. As well as the chemicals actually involved, under substances to be used enter the special chemical "base bath" which has been set as a 5A,F on the database and will trigger the requirement for Safety Coordinator approval and allows easy management of all base bath RAs.
3. In the procedure section include the main requirements specified in Safety Handbook section 8.2. If you want to include a standard operating procedure this is easily attached as a PDF.
4. Under risks choose 'fire' and 'burns'.

Excess solvent storage

Any lab wishing to store greater than 50 litres of flammable solvents must complete a risk assessment. There must be one and only one such RA for each lab involved. In calculating the total amount of solvents stored in a lab, only consider containers of 1 litre and larger and include only those with a Flash Point at or below room temperature (see list below). Do not include solvents in use, for example on an HPLC instrument, in wash bottles, or in reactions: it is only those being stored to which the limit applies. Batches of special solvents ordered by groups eg for HPLC or SPS should be kept at a reserved section of the external Solvent Store until required and not stored in labs.

1. As well as listing the solvents involved (see list below), under substances to be used enter the special chemical "excess solvents" which has been set as a 5F on the database and will trigger the requirement for Safety Coordinator approval and allows easy management of solvent stock levels.
2. Under procedure explain briefly why the excess solvents stock is required, where exactly it will be stored and an indicative total stock level.
3. Under risks choose only 'fire' - there may be other risks but these are not relevant here. Leave all the remaining sections of the RA form blank.

List of solvents subject to the 50 litre limit with flash points in °C

Acetone	-17
Acetonitrile	+5
Benzene	-11
Butanol t-	+4
Butanone -2-	-3
t-Butyl methyl ether	-10

Chlorobenzene	+23
Cyclohexane	-18
Dichloroethane 1,2-	+15
Dimethoxyethane 1,2	0
Dioxane	+12
Ethanol	+8
Ether	-40
Ethyl acetate	-3
Ethylbenzene	+22
Ethyl formate	-19
Heptane	-1
Hexane	-23
Isopropanol	+22
Methanol	+11
Methylcyclohexane	-4
Methylcyclopentane	-23
Octane	+15
Pentane	-49
Petroleum bp 40-60	-49
Petroleum bp 60-80	-18
Propanol n-	+15
Propyl acetate	+12
Pyridine	+20
Tetrahydrofuran	-17
Toluene	+4

Solvents NOT included

Acetic acid	+40
Butanol n-	+35
Chloroform	none
Decane	+46
Dichlorobenzene o-	+65
Dichloromethane	none
Dimethylacetamide	+70
Dimethylformamide	+57
Dimethyl sulfoxide	+95
Ethoxyethanol 2-	+44
Ethylene glycol	+110
Formic acid	+68
Nitrobenzene	+87
Nitromethane	+35
Xylene	+29