

The supply and use of CI Solvent Red 164 as a penetrant dye

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Background



- Questions were raised in the national news media and at an HSE / stakeholder partner cancer workshop about CI Solvent Red 164
- Potential for this dye to metabolise within the body and liberate o-toluidine and / or aniline
- HSE sought a view from WATCH on this issue
- HSE / HSL were not aware of any industry hazard or exposure data on this issue when this work was begun in 2008

WATCH/2011/4 - issue

WATCH2008/1 reviewed the use of CI Solvent Red 164 as a penetrant dye and concluded:

- Lack of hazard and exposure data
- Treat as a suspect carcinogen
- Need to gather exposure data
- Issues require more attention from industry
- Insufficient available information to recommend an alternative

Survey contacts



- HSE / HSL visited all known formulators and small number of manufacturing sector sites engaged in non destructive testing (NDT)
- HSE / HSL recruited a small number of independent NDT consultants
- These sets of workers submitted urine samples to be analysed for the presence of o-toluidine and aniline

Survey results - Aniline

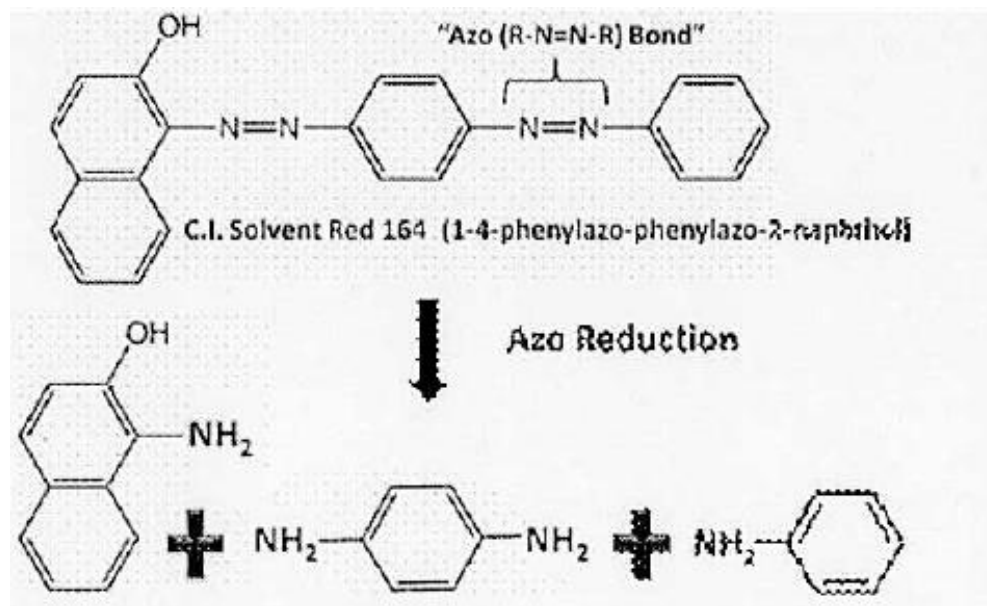
- Formulators - 40 data points (pre and post shift samples from 13 workers). No results higher than those in general population except for one worker (2 samples)
- NDT workers - 67 data points (pre and post shift samples from 15 workers). No results higher than those in general population except for four workers (four samples)

Survey results – o-toluidine

- Formulators – 61 data points (pre and post shift samples from 16 workers). No results higher than those in general population
- NDT workers – 67 data points (pre and post shift samples from 15 workers). No results higher than those in general population

Late submission

A stakeholder partner now indicates CI Solvent Red 164 would not break down to o-toluidine, which may explain the absence of any data above background level



1-amino-2-naphthol

1,4-diaminobenzene

Phenylamine 'Aniline'

Conclusions

The findings from the limited data set provided in this study do not present a cause for concern regarding the potential levels of exposure to CI Solvent Red 164 and its alleged metabolites aniline and o-toluidine