

COSHH ASSESSMENT — REFRIGERANT GASES

COSHH — SUBSTANCE ASSESSMENT

HFC, HFO, ammonia and CO2 refrigerants in air conditioning and refrigeration work

KD-COSHH-RF-040 Rev A0

COSHH 2002 reg 6: exposure is assessed BEFORE the work starts; reg 7: it is prevented, or adequately controlled, working down the hierarchy — eliminate, substitute, engineer, then RPE last. This assessment covers the substance family below; it is completed against the actual products (their safety data sheets alongside) and the actual task, and briefed to the people exposed. The current workplace exposure limit, where one applies, comes from EH40 and the SDS on the day — write it in below.

1 ASSESSMENT DETAILS

SITE / PROJECT

TASK ASSESSED

PRODUCTS IN USE (SDS TO HAND)

ASSESSED BY

DATE

2 THE SUBSTANCE — WHAT IT IS AND WHAT IT DOES

WHERE IT IS MET: Charging, recovering and decommissioning refrigeration and air-conditioning systems, brazing joints on charged pipework, and leaks in plant rooms. Exposure is the gas released in an enclosed plant room, liquid contact on skin, and the fume from heating some refrigerants.

THE HARM: Most refrigerants are asphyxiants — heavier than air, they displace oxygen in plant rooms and pits without warning (ammonia is the exception: lighter than air, toxic and corrosive). Liquid contact causes frostbite. Some refrigerants decompose in a flame to acid gases; ammonia is toxic and corrosive; hydrocarbon and some newer refrigerants are flammable. Cylinders are pressurised.

3 EXPOSURE — ROUTES, PEOPLE, LIMIT

Inhalation — dust, fume, vapour or mist

Ingestion — hand to mouth

Skin and eye contact

Others affected — adjacent trades, occupiers, public

WHO IS EXPOSED, HOW LONG, HOW OFTEN

WEL / LIMIT (FROM EH40 AND THE SDS TODAY)

4 CONTROLS — IN THE REG 7 HIERARCHY, ALL IN PLACE BEFORE WORK STARTS

Refrigerant handled only by people holding the F-gas certification the law requires for HFC and HFO systems, and demonstrably competent for ammonia, CO2 and hydrocarbon systems, which the F-gas rules do not cover — recorded on the RAMS

Plant rooms ventilated before entry and while charged systems are worked on; oxygen and refrigerant detection where the RAMS requires; the confined space assessment if the room qualifies

Systems recovered — never vented — before brazing or opening; no flame on pipework that still holds refrigerant

Gauntlets and eye protection for connection work; cylinders secured upright, valves protected

A leak clears the room first and is investigated second

SITE-SPECIFIC CONTROLS FOR THIS TASK

RPE WORN (TYPE, AND FACE-FIT WHERE TIGHT-FITTING)

OTHER PPE FOR THIS SUBSTANCE

5 HEALTH SURVEILLANCE, HYGIENE AND FIRST AID

None routinely; any exposure symptoms (dizziness, breathlessness) treated as asphyxiation.

6 STORAGE, SPILLAGE AND DISPOSAL

Cylinders outside or in a ventilated store, upright, secured, away from heat, full and empty segregated; recovered refrigerant in labelled recovery cylinders for licensed disposal.

WHERE IT IS STORED ON THIS SITE

SPILL RESPONSE AT THE WORK

7 SIGN-OFF AND BRIEFING

The assessment is complete when the people exposed have been briefed on it. Reassess when the product, task, quantity or location changes — not on an anniversary.

ASSESSOR — PRINTED NAME

SIGNATURE

DATE

WORKFORCE BRIEFED (DATE / RECORD REF)

R REVISION HISTORY

Every revision of this document, and every review that found nothing to change. The revision on the front of this sheet is the one you are holding — check kubitdocs.com for the current one before use.

Rev	Date	Class	What changed	Authorised by
D0	2026-09-01	first-issue	First issue.	— not yet approved —
A0	2026-09-01	review	Approved for issue by the author. Content unchanged from the reviewed draft; the draft status strip is removed. No independent third-party review has been carried out.	Author — director, UK principal contractor, SMSTS. Not an independent review.

Class: first-issue · material (the law, a control, a field or the scope changed — past buyers are notified) · editorial (wording or layout only) · review (checked, nothing changed) · withdrawal. Revision prefix D = draft, not approved and not for sale; A = approved for issue by the person named, on the date shown.