Substance Information Document

3-methylbutan-1-ol

1. Substance identity

Name	3-methylbutan-1-ol
Synonyms	Isoamyl alcohol, Isopentyl alcohol
IUPAC Name	3-methylbutan-1-ol
CAS	123-51-3

2. Toxicological information

Expert groups, including ECHA and RIFM have concluded that based on the current data, isoamyl alcohol does not present a concern for genotoxicity.

Carcinogenicity data are limited, nevertheless based on in vitro and in vivo genetic toxicity tests with 3-methylbutan-1-ol and its structural analogues, these substances are not considered to be genotoxic. In addition, ECHA expert considered that "there is no indication from repeated dose studies that the substances are able to induce hyperplasia or pre-neoplastic lesions. Thus, there is not concern regarding carcinogenicity for these substances".

Studies in laboratory animals suggest that 3-methylbutan-1-ol is of moderate-low acute oral toxicity and repeated-dose toxicity (LD50 rats 1300 mg/kg bw, LD50 rabbits 3438 mg/kg bw, NOAEL 1250 mg/kg bw/day 90-day). Studies in laboratory animals suggest that 3-methylbutan-1-ol is of moderate-low acute dermal and inhalation toxicity (Inhalation LC0 > 10000 mg/m3 in rats, Dermal LD50 rabbits 2000 mg/kg bw), however, limited information is available on the repeated-dose toxicity of 3-methylbutan-1-ol after inhalation or dermal exposure.

Developmental and reproductive toxicity was assessed by ECHA and RIFM experts, who concluded on 300 mg/kg bw/day as NOAEL.

Based on human maximization tests conducted, ECHA concluded that 3-methylbutan-1-ol does not present a concern for skin sensitization.

JECFA	WHO_TRS_868.pdf
FEMA	0320 FEMA GRAS 29 (femaflavor.org)
EFSA	Scientific Opinion on the safety and efficacy of branched-chain primary aliphatic alcohols/aldehydes/acids, acetals and esters with esters containing branched-chain alcohols and acetals containing branched-chain aldehydes (chemical group 2) when used as flavourings for all animal species (wiley.com)
ECHA – REACH dossier	Registration Dossier - ECHA (europa.eu)
PUBCHEM	Isoamyl alcohol | C5H12O - PubChem (nih.gov)

CIR	-
OSHA	ISOAMYL ALCOHOL | Occupational Safety and Health Administration (osha.gov)

3. Addictiveness and attractiveness

No substance-specific data were identified.

SCENIHR	-
EMA	-
PUBMED	-