

Annex 15 report

Proposal for identification of a substance of very high concern (SVHC) under UK REACH

Substance Name(s): Small brominated alkylated alcohols (SBAA)

2,2-bis(bromomethyl)propane-1,3-diol (BMP) - EC Number: 221-967-7, CAS Number: 3296-90-0;

2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA) - EC Number: 253-057-0, CAS Number: 36483-57-5/1522-92-5;

2,3-dibromo-1-propanol (2,3-DBPA) - EC Number: 202-480-9, CAS Number: 96-13-9

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1. Proposal

Names of substances:

- 2,2-bis(bromomethyl)propane-1,3-diol (BMP)
EC Number: 221-967-7, CAS Number: 3296-90-0;
- 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA)
EC Number: 253-057-0, CAS Numbers: 36483-57-5/1522-92-5;
- 2,3-dibromo-1-propanol (2,3-DBPA)
EC Number: 202-480-9, CAS Number: 96-13-9

These substances are collectively known as small brominated alkylated alcohols (SBAA).

These substances are proposed to be identified as substances meeting the criteria of Article 57 (a) of UK REACH owing to their classification in the hazard class carcinogenicity category 1B¹.

Summary of how the substances meet the criteria set out in Article 57 of UK REACH

BMP, TBNPA and 2,3-DBPA are included in the GB Mandatory Classification and Labelling (MCL) list and they are covered by the entries with respective index numbers 603-240-00-X, 603-243-00-6 and 602-088-00-1. These substances are classified in the hazard class carcinogenicity category 1B (H350: May cause cancer).

¹ Classification in accordance with section 3.6 of Annex I to the retained Regulation (EC) No 1272/2008 as amended for Great Britain (hereinafter referred to as GB CLP).

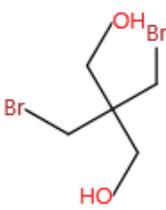
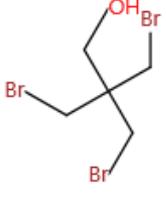
2. Justification

2.1 Identity of the substance and physical and chemical properties

2.1.1 Name and other identifiers of the substance

Table 1: Substance identity

EC number:	221-967-7	253-057-0	202-480-9
EC name:	2,2-bis(bromomethyl)propane-1,3-diol	2,2-dimethylpropan-1-ol, tribromo derivative	2,3-dibromopropan-1-ol
CAS number:	3296-90-0	36483-57-5 1522-92-5	96-13-9
IUPAC name:	2,2-bis(bromomethyl)propane-1,3-diol	2,2-dimethylpropan-1-ol, tribromo derivative; 3-bromo-2,2-bis(bromomethyl)propan-1-ol	2,3-dibromopropan-1-ol
Index number in GB MCL List	603-240-00-X	603-243-00-6	602-088-00-1
Molecular formula:	C ₅ H ₁₀ Br ₂ O ₂	C ₅ H ₉ Br ₃ O	C ₃ H ₆ Br ₂ O
Molecular weight range:	261.94 g/mol	324.838 g/mol	217.89 g/mol
Synonyms:	BMP 2,2-BBMPD	TBNPA Tribromoneopentyl alcohol	2,3-DBPA Dibromopropanol

	2,2-bis(bromomethyl)-1,3-propanediol FR-1138 DBNPG	FR-513	1-propanol, 2,3-dibromo-
Structural formula:			
Substance type:	Mono-constituent	Mono-constituent	Mono-constituent

Data source: EU Annex 15 report ([ECHA, 2021](#)) and HSE's Technical Report for these SBAAAs ([HSE 2025](#))

2.1.2 Composition of the substance

Impurities and/or additives are not relevant for SVHC identification of the substance.

2.1.3 Identity and composition of degradation products/metabolites relevant for the SVHC assessment

Not relevant for the identification of the substance as a SVHC in accordance with Article 57 (a) of UK REACH.

2.1.4 Identity and composition of structurally related substances (used in grouping or read-across approach)

Not relevant for the identification of the substance as a SVHC in accordance with Article 57 (a) of UK REACH.

2.1.5 Physicochemical properties

Not relevant for the identification of the substance as a SVHC in accordance with Article 57 (a) of UK REACH.

2.2 Mandatory classification and labelling

Table 2: Mandatory classification in the GB MCL list

Index No	International Chemical Identification	EC No	CAS No	GB MCL list Classification		Aligned with EU CLH ^a
				Hazard Class and Category Code(s)	Hazard statement code(s)	Y/N
603-240-00-X	2,2-bis(bromomethyl)propane-1,3-diol	221-967-7	3296-90-0	Carc. 1B Muta. 1B	H350 H340	Y
603-243-00-6	2,2-dimethylpropan-1-ol, tribromo derivative; 3-bromo-2,2-bis(bromomethyl)propan-1-ol	253-057-0	36483-57-5; 1522-92-5	Carc. 1B Muta. 2	H350 H341	Y
602-088-00-1	2,3-dibromopropan-1-ol; 2,3-dibromo-1-propanol	202-480-9	96-13-9	Carc. 1B Repr. 2 Acute Tox. 3* Acute Tox. 4* Acute Tox. 4* Aquatic Chronic 3	H350 H361f*** H311 H332 H302 H412	Y

^a EU CLH is harmonised classification and labelling in accordance with Regulation (EC) 1272/2008

* Minimum classification owing to the deviation between hazard classes under Directive 67/548/EEC and GB CLP.

*** Classified for effects on fertility under Directive 67/548/EEC(The Dangerous Substances Directive)

2.3 Human health hazard assessment

Please see Section 2.2 (mandatory classification and labelling).

2.4 Conclusions on the SVHC properties

2.4.1 CMR assessment

BMP, TBNPA and 2,3-DBPA are covered by the entries with respective index numbers 603-240-00-X, 603-243-00-6 and 602-088-00-1 in the GB MCL list. They are classified in the hazard class carcinogenicity category 1B (hazard statement H350: “May cause cancer”).

Therefore, the criterion in Article 57 (a) of UK REACH is met for the 3 SBAs covered in this proposal.

3. Information on use, exposure and alternatives

3.1 UK and EU REACH registration status and tonnage

BMP

The substance is registered in the range of 100 – 1000 tonnes per annum (tpa) under UK REACH. In addition, 16 Downstream User Import Notifications (DUINs²) have been submitted.

Under EU REACH, the substance is currently registered in the 1-10 tpa range³. In the EU Annex 15 SVHC report ([ECHA, 2021](#)), the aggregated tonnage at that time was reported to be 100 – 1000 tpa.

TBNPA

The substance is not registered under UK REACH. However, 13 DUINs² have been submitted.

Under EU REACH, the substance is registered with an aggregated tonnage of 100 – 1000 tpa³.

2,3-DBPA

The substance is not registered under UK REACH. However, 2 DUINs² have been submitted.

Under EU REACH, the substance is registered as an intermediate only³.

² GB-based companies who imported substances from EU-based suppliers before UK REACH became law on 1 January 2021 had no EU REACH registration obligations as they were classed as Downstream Users (DUs). As they are now importers from outside of GB, they may have registration obligations under UK REACH. However, a transitional measure allows former DUs to suspend the registration until one of three deadlines (depending on tonnage and hazard). Where the identity of these imported substances was known, they could be included in a Downstream User Import Notification (DUIN) submitted to the Agency.

³ ECHA Chemicals database; ECHA CHEM <https://chem.echa.europa.eu/>

3.2 General description of uses and exposure

Information was provided to HSE during the call for evidence to support the Technical Report (TR) for SBAAAs ([HSE 2025](#)).

The TR notes that BMP is imported into GB for use as a reactive flame-retardant intermediate in the production of unsaturated polyester (UPE) resins. Flame retarded resins where the SBAA is already reacted into the polymer are likely also imported. These resins are used in the production of glass reinforced plastic (GRP), with a specific major application in the manufacture of translucent sheets for light-transmitting roofing (roof lights). These roof lights are widely used in industrial warehouses, distribution centres, farm buildings, etc. Land and marine transport applications have also been reported. In addition, potential use of BMP in one-component foams (with application in construction) is also possible. As is use in the automotive industry (e.g., in applications such as air conditioning compressors, power electronics etc.) and in industrial and consumer electrical articles more broadly.

The information submitted for the TR also indicated that TBNPA is used as a reactive intermediate for high molecular weight flame retardants and as a reactive flame retardant in CFC-free polyurethanes. It was noted to be particularly suitable where thermal, hydrolytic and light stability are required. Although less information was provided for TBNPA, the TR noted that it likely has a similar use profile to BMP and may be found in the same or similar articles in GB.

There are references to 2,3-DBPA having been used as a flame retardant, but available evidence suggests this may no longer be a relevant use. It may be used as an intermediate in the preparation of flame retardants, insecticides and pharmaceuticals and, under EU REACH, it is only registered as an intermediate. Whilst limited information was available for this substance, the TR noted that there remains a possibility it could be imported into GB as the substances itself, in mixtures or in articles.

Further information on uses can be found in the TR ([HSE 2025](#)).

3.3 Alternatives

The EU Annex 15 SVHC report ([ECHA, 2021](#)) references the potential for alternatives to SBAAAs, including the ongoing development of non-halogenated flame retardants and phosphate ester flame retardants. Tables 1 and 2 of ECHA's flame retardants strategy also lists some flame retardants which are used in applications where SBAAAs are used ([ECHA, 2023](#)).

HSE's TR ([HSE 2025](#)), noted that a major factor in the selection of flame retardants is whether or not it ensures articles meet any applicable fire performance standards for that

article, and that flame retardants are often very specific for their intended polymer or application.

The inability of alternatives to these SBAAAs to meet GB fire performance standards was identified as a potential barrier to substitution by several companies that responded to HSE's call for evidence, noting that the UK has stringent fire performance standards that differ to those adopted in other jurisdictions (including various EU Member States).

It is also noted that some potential alternatives may also have hazard concerns which mean they may not be appropriate substitutes.

Further information on alternatives can be found in the TR ([HSE 2025](#)).

3.4 Additional information

No additional relevant information available.

References

ECHA (2021) PROPOSAL FOR IDENTIFICATION OF SUBSTANCES OF VERY HIGH CONCERN ON THE BASIS OF THE CRITERIA SET OUT IN REACH ARTICLE 57.

Available at: <https://echa.europa.eu/documents/10162/8f95b1d7-1691-21d0-4a3b-6652b183a4e9> [Accessed: 09/2025]

ECHA (2021) Inclusion of substance of very high concern in the Candidate List for eventual inclusion in Annex XIV. Available at:

<https://echa.europa.eu/documents/10162/6c954d43-13d4-b12b-4c0a-bc6c1f35fc72> [Accessed: 09/2025]

ECHA (2021) PROPOSAL FOR IDENTIFICATION OF A SUBSTANCE OF VERY HIGH CONCERN ON THE BASIS OF THE CRITERIA SET OUT IN REACH ARTICLE 57.

Available at: <https://echa.europa.eu/documents/10162/8f95b1d7-1691-21d0-4a3b-6652b183a4e9> [Accessed: 09/2025]

HSE (2025) Technical Report for 2,2-bis(bromomethyl)propane1,3-diol (BMP), EC Number: 221-967-7, CAS Number: 3296-90-0 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2- bis(bromomethyl)-1-propanol (TBNPA), EC Number: 253-057-0, CAS Number: 36483-57-5/1522-92-5 2,3-dibromo-1-propanol (2,3-DBPA), EC Number: 202-480-9, CAS Number: 96-13-9 (SBAAs). Available at

<https://www.hse.gov.uk/reach/assets/docs/technical-report-sbaa.pdf>

ECHA Chemicals database; ECHA CHEM. Available at: <https://chem.echa.europa.eu/> [Accessed: 09/2025]

ECHA (2023). Regulatory strategy for flame retardants. Available at:

https://echa.europa.eu/documents/10162/2082415/flame_retardants_strategy_en.pdf/ [Accessed 09/2025]

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Text with EEA relevance). Available at:

<https://www.legislation.gov.uk/eur/2008/1272/contents> [Accessed 09/2025].

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission

Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (Text with EEA relevance). Available at: <https://www.legislation.gov.uk/eur/2006/1907/contents> [Accessed 09/2025]

Glossary of terms used in Agency Annex 15 report

Agency, the HSE

CLP	Classification, labelling and packaging
DUIN	Downstream User Import Notifications
ECHA	European Chemicals Agency
EU	European Union
HSE	Health and Safety Executive
MCL	Mandatory Classification and Labelling
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals regulation
SBAA	Small brominated alkylated alcohols
SVHC	Substance of very high concern
tpa	Tonnage per annum



Further information

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