

Helaian Data Keselamatan

Safety data sheet

Mukasurat (Page): 1/25

BASF Helaian Data Keselamatan (BASF Safety data sheet)

Tarikh / Disemak (Date / Revised): 15.04.2023

Versi (Version): 6.1

Produk (Product): **Ammonium carbonate Food Grade (E503i)**

(30042216/SDS_GEN_MY/MS)

Tarikh cetakan (Date of print): 20.10.2025

1. Pengenalan bahan kimia dan pembekal

Ammonium carbonate Food Grade (E503i)

Kegunaan: bahan tambah makanan

Penggunaan bahan kimia yang disyorkan dan sekatan penggunaan:

Cadangan penggunaan: bahan tambah makanan, Bahan mentah

Syarikat:

BASF (Malaysia) Sdn Bhd
Lot 19.02 Level 19, 1 Powerhouse
No 1 Persiaran Bandar Utama
47800 Petaling Jaya
Selangor D.E, MALAYSIA
Nombor Telefon: +60 3 7612 1888
Nombor Telefax: +60 3 7612 1777

Maklumat kecemasan:

Nombor Kecemasan Kebangsaan
+603 7612 1999
Nombor Kecemasan Antarabangsa:
Nombor Telefon: +49 180 2273-112

2. Pengenalan Bahaya

Pengelasan bahan dan campuran:

Toks. Akut 4 (oral)

Kros./Kreng. Mata 2

Bagi pengelasan yang tidak ditulis dengan penuh dalam bahagian ini, teks lengkap boleh didapati di bahagian 16.

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Unsur label dan pernyataan berjaga-jaga:

Piktogram:



Kata Isyarat:

Amaran

Pernyataan Bahaya:

H319 Menyebabkan kerengsaan mata yang serius.

H302 Memudaratkan jika tertelan.

Pernyataan Berjaga-jaga (Pencegahan):

P280 Pakai perlindungan mata.

P270 Jangan makan, minum atau merokok semasa menggunakan produk ini.

Pernyataan Berjaga-jaga (Tindak Balas):

P305 + P351 + P338 JIKA TERKENA MATA: Bilas berhati-hati dengan air selama beberapa minit. Tanggalkan kanta lekap, jika ada dan dapat dilakukan dengan mudah. Teruskan membilas.

P301 + P312 JIKA TERTELAN: Hubungi PUSAT RACUN atau doktor/pakar perubatan jika anda rasa tidak sihat.

P330 Bilas mulut.

Pernyataan Berjaga-jaga (Pelupusan):

P501 Buangkan kandungan dan bekas ke tempat pengumpulan bahan sisa merbahaya atau khas.

Bahaya lain yang tidak menyebabkan pengelasan:

Jika berkenaan, maklumat yang diberikan dalam bahagian ini tentang bahaya lain tidak menyebabkan pengelasan tetapi mungkin menyumbang kepada bahaya bahan atau campuran secara keseluruhan.

Merengsakan mata, sistem pernafasan dan kulit (debu).

Produk ini tidak mengandungi bahan yang melebihi had undang-undang untuk mematuhi kriteria PBT (berketerusan/bioakumulatif/bertoksik atau kriteria vPvB (amat berketerusan/amat bioakumulatif). Produk tidak mengandungi bahan melebihi had undang-undang yang termasuk di dalam senarai yang disediakan mengikut Artikel 59(1) Peraturan (EC) No. 1907/2006 kerana mengandungi ciri-ciri gangguan endokrin atau telah dikenalpasti untuk mengandungi ciri-ciri gangguan endokrin mengikut kriteria yang ditetapkan dalam Peraturan Wakilan Suruhanjaya (EU) 2017/2100 atau Peraturan Suruhanjaya (EU) 2018/605.

3. Komposisi dan Maklumat Mengenai Ramuan Bahan Kimia

Kedadaan kimia

Sediaan berdasarkan: Ammonium karbamat, Ammonium hidrogenkarbonat
 $\text{H}_2\text{CO}_3 \cdot x \text{NH}_3$

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CAS: 10361-29-2 EINECS: 233-786-0

Ramuan berbahaya

Ammonium karbamat

Kandungan (berat/berat): 50 %

Nombor CAS: 1111-78-0

Toks. Akut 4 (oral)

Kros./Kreng. Mata 1

Ammonium hidrogenkarbonat

Kandungan (berat/berat): 50 %

Nombor CAS: 1066-33-7

Toks. Akut 4 (oral)

Bagi pengelasan yang tidak ditulis dengan penuh dalam bahagian ini, teks lengkap boleh didapati di bahagian 16.

4. Langkah-Langkah Pertolongan Cemas

Jika tersedut:

Jika tersedut produk penguraian: Tenangkan pesakit, alihkan ke tempat berudara bersih, dapatkan rawatan perubatan.

Apabila terkena kulit:

Basuh bersih-bersih dengan sabun dan air.

Apabila terkena mata:

Basuh mata yang terkena produk selama sekurang-kurangnya 15 minit di bawah aliran air sambil membuka mata.

Apabila tertelan:

Segera berkumur, kemudian minum 200-300 ml air, dapatkan rawatan perubatan.

Nota kepada doktor:

Gejala: Pendedahan berlebihan mungkin menyebabkan :, muntah, dyspnea, loya, batuk

Nota kepada doktor:

Rawatan: Jika tersedut produk penguraian: Profilaksis pulmonari odema. Rawat mengikut gejala (nyahcemar, fungsi utama), tiada penawar khusus diketahui, berikan aerosol dos kortikosteroid untuk mengelakkan edema pulmonari.

5. Langkah-Langkah Pemadaman Kebakaran

Bahan pemadam yang sesuai:

semburan air, karbon dioksida, busa

Bahaya tertentu:

ammonia, karbon dioksida

Bahan/kumpulan bahan yang dinyatakan boleh dibebaskan jika berlaku kebakaran.

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Maklumat lanjut:

Produk itu sendiri tidak mudah terbakar; kaedah memadam api setempat mestilah diberikan perhatian.

6. Langkah-Langkah Pelepasan Tidak Sengaja

Perlindungan diri, kelengkapan pelindung dan tatacara kecemasan:

Perlindungan pernafasan diperlukan. Pastikan ekstrak udara/pengalihudaraan yang sesuai disediakan semasa mencuci/mengosongkan mesin pemprosesan.

Langkah berjaga-jaga untuk alam sekitar:

Jangan lepaskan ke dalam parit/air permukaan/air tanah.

Kaedah pembersihan atau penyerapan:

Bagi baki: Sapu/sodok.

Elakkan pertambahan debu.

7. Pengendalian dan Penyimpanan

Pengendalian

Pernafasan mestilah dilindungi apabila produk dalam jumlah yang banyak disiring tanpa pengalihudaraan ekzos setempat. Mesin pemproses mestilah dipasang dengan pengalihudaraan ekzos setempat. Elakkan pembentukan debu.

Perlindungan terhadap kebakaran dan letupan:

Simpan di tempat dingin. Jika dipanaskan dram boleh pecah disebabkan oleh penghasilan tekanan.

Penyimpanan

Asingkan daripada nitrik dan bahan beralkali. Penyimpanan dan pengangkutan hanya digabungkan dengan bahan makanan atau bahan tambahan makanan. Berasingan daripada agen perasa. Jangan simpan dengan: Natrium nitrat, natrium nitrit

Bahan yang sesuai untuk bekas: aluminium, Polietilena ketumpatan tinggi (HDPE), kaca, Polietilena ketumpatan rendah (LDPE), Keluli tahan karat 1.4541, Keluli tahan karat 1.4571, berenamel, terlekat
Maklumat lanjut tentang keadaan penyimpanan: Simpan bekas di tempat yang mempunyai pengalihan udara yang baik. Pastikan bekas sentiasa kering.

Kestabilan penyimpanan:

Suhu penyimpanan: < 30 °C

Suhu penyimpanan yang dinyatakan hendaklah diberikan perhatian.

Lindungi daripada suhu melebihi : 30 °C

Perubahan ciri produk boleh berlaku jika bahan/produk disimpan melebihi suhu yang dinyatakan bagi tempoh yang panjang.

8. Kawalan pendedahan dan perlindungan diri

Komponen dengan parameter kawalan tempat kerja

Tiada had pendedahan pekerjaan tertentu yang diketahui.

Peralatan perlindungan peribadi

Perlindungan pernafasan:

Perlindungan pernafasan yang sesuai bagi kepekatan yang rendah atau kesan jangka pendek:

Penapis zarah kecekapan rendah bagi zarah pepejal (contohnya EN 143 atau 149, Jenis P1 atau

FFP1) Perlindungan pernafasan yang sesuai bagi kepekatan yang tinggi atau kesan jangka panjang:

Alat pernafasan serba lengkap.

Perlindungan tangan:

Sarung tangan pelindung kalis kimia (EN ISO 374-1)

Bahan yang sesuai juga sekiranya terkena produk secara berpanjangan dan langsung. (Syor: Indeks perlindungan 6, bersamaan > 480 minit tempoh penelapan menurut EN ISO 374-1):

polivinilklorida (PVC) - 0.7 mm ketebalan salutan

getah kloroprena (CR) - ketebalan salutan 0.5 mm

Nota tambahan : Spesifikasi adalah berdasarkan ujian –ujian, data penerbitan dan maklumat dari pengeluar sarung tangan atau diambil yang serupa secara analogi. Oleh sebab banyak keadaan yang perlu dipertimbangkan (misalnya suhu), perlulah diambil kira, bahawa secara praktikalnya tempoh penggunaan sarung tangan pelindung kimia mungkin lebih pendek daripada tempoh penelapan yang ditentukan menurut ujian.

Arahan penggunaan pengilang hendaklah dipatuhi kerana jenisnya yang pelbagai.

Perlindungan mata:

Kaca mata keselamatan dengan pelindung sisi (gogal berbingkai) (contohnya EN 166)

Perlindungan badan:

Perlindungan badan mestilah dipilih berdasarkan tahap aktiviti dan pendedahan.

Langkah kebersihan dan keselamatan am:

Jangan menyedut habuk. Pada akhir waktu kerja, kulit hendaklah dibasuh dan disapukan dengan agen penjagaan kulit.

9. Sifat Fizikal dan Kimia

Bentuk:	kristal, serbuk
Warna:	putih
Bau:	kuat, seperti ammonia
Ambang bau:	Tiada data diperolehi., tidak ditentukan

nilai pH:	9 (100 g/l, 20 °C)
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takat lebur:	Tidak boleh digunakan Bahan/produk mengurai.
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Julat didih:	Kajian secara teknikalnya tidak boleh dijalankan., Penguraian bahan / produk tidak ditentukan.
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Takat kilat:	tidak boleh digunakan, produk adalah pepejal	
Tahap penyejatan:	sedikit sahaja, Produk ini adalah pepejal tidak meruap	
Kemudahbakaran (pepejal/gas):	tidak sangat mudah terbakar	(Peraturan 440/2008/EC, A.10)
Had letupan bawah:	Tidak berkaitan untuk pengelasan dan pelabelan bagi pepejal.	
Had letupan atas:	Tidak berkaitan untuk pengelasan dan pelabelan bagi pepejal.	
Suhu pencucuhan:	Penguraian bahan / produk tidak ditentukan.	
Penguraian terma:	> 59 °C Untuk mengelakkan penguraian terma, elakkan pemanasan yang berlebihan.	(kaedah dalaman)
pencucuhan sendiri:	Tidak swacucuh.	
Kebolehan swapemanasan sendiri:	Ia bukanlah bahan yang mampu pemanasan spontan.	
Bahaya letupan:	tidak mudah meletup	
Sifat yang menggalakkan kebakaran:	tidak merebakkan api	
Tekanan Wap:	69 mbar (20 °C) Data penulisan. 188 mbar (30 °C) Data penulisan.	
Kepekatan:	dianggarkan 1.6 g/cm ³ (20 °C)	(Garis panduan OECD 109)
Ketumpatan pukal:	780 - 830 kg/m ³	(lain)
Keterlarutan dalam air:	320 g/l (20 °C)	
Pekali petakan n-oktanol/air (log Pow):	-2.4 - -0.47	
Kelikatan, dinamik:	tidak boleh digunakan, produk adalah pepejal	
Kelikatan, kinematik:	tidak boleh digunakan, produk adalah pepejal	

10. Kestabilan dan Kereaktifan

Kedadaan yang perlu dielakkan:

Elakkan haba Lihat MSDS bahagian 7 - Pengendalian dan Penyimpanan.

Penguraian terma:

> 59 °C (kaedah dalaman)

Untuk mengelakkan penguraian terma, elakkan pemanasan yang berlebihan.

Bahan yang perlu dielakkan:

bes kuat

Tindak balas berbahaya:

Tindak balas eksoterma. Bertindak balas dengan nitrit Bertindak balas dengan nitrat

Bahan penguraian berbahaya:

ammonia, karbon dioksida

Kereaktifan:

Kestabilan kimia:

11. Maklumat Toksikologi

Ketoksikan akut

Penilaian ketoksikan akut:

Ketoksikan sederhana selepas kali pertama tertelan.

Data eksperimen/dikira:

LD50 tikus (melalui mulut): > 1,800 - < 2,150 mg/kg (Ujian BASF)

LD50 tikus (dermal): > 2,000 mg/kg

Tiada kematian diperhatikan

Maklumat tentang : Ammonium hidrogenkarbonat

Data eksperimen/dikira:

LC50 tikus (melalui penyedutan): > 4.74 mg/l 4.5 h (lain)

Produk belum diuji. Penyataan diambil daripada bahan/produk yang mempunyai struktur dan komposisi yang sama. Aerosol diuji

Maklumat tentang : Ammonium karbamat

Data eksperimen/dikira:

LC50 tikus (melalui penyedutan): 6.6 mg/l 4 h (Garis panduan OECD 403)

Produk belum diuji. Penyataan diambil daripada bahan/produk yang mempunyai struktur dan komposisi yang sama. Produk tidak diperiksa: Nilai dikira daripada data komponen

Kerengsaan

Penilaian kesan merengsa:

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Tidak merengsakan kulit. Sentuhan dengan mata boleh menyebabkan kerengsaan.

Data eksperimen/dikira:

Kakisan/Kerengsaan kulit arnab:

Produk belum diuji. Penyataan diambil daripada ciri setiap komponen.

Kerosakkan/kerengsaan mata yang serius arnab: Merengsa (Garis panduan OECD 405)

Maklumat tentang : Ammonium karbamat

Penilaian kesan merengsa:

Boleh menyebabkan kerosakkan teruk kepada mata. Tidak merengsakan kulit.

Maklumat tentang : Ammonium hidrogenkarbonat

Penilaian kesan merengsa:

Tidak merengsakan mata. Tidak merengsakan kulit. Produk belum diuji sepenuhnya. Pernyataan diambil sebahagiannya daripada produk yang mempunyai struktur dan komposisi yang sama.

Pemekaan pernafasan/kulit

Penilaian pemekaan:

Struktur kimia tidak mencadangkan kesan pemekaan.

Kemutagenan sel germa

Penilaian kemutagenan:

Tiada data diperoleh tentang kesan mutagen. Struktur kimia tidak menunjukkan amaran khusus bagi kesan tersebut.

Maklumat tentang : Ammonium hidrogenkarbonat

Penilaian kemutagenan:

Bahan tidak mutagen dalam bakteria. Bahan tidak mutagen dalam kultur sel mamalia.

Maklumat tentang : Ammonium karbamat

Penilaian kemutagenan:

Ujian kemutagenan membuktikan tiada potensi genotoksik . Produk belum diuji sepenuhnya.

Pernyataan diambil sebahagiannya daripada produk yang mempunyai struktur dan komposisi yang sama.

Kekarsinogenan

Maklumat tentang : Ammonium hidrogenkarbonat

Penilaian kekarsinogenan:

Semua maklumat yang boleh didapati tidak menyediakan petunjuk kepada kesan karsinogen. Produk belum diuji. Penyataan diambil daripada bahan/produk yang mempunyai struktur dan komposisi yang sama.

Maklumat tentang : Ammonium karbamat

Penilaian kekarsinogenan:

Tidak menunjukkan kesan karsinogen dalam uji kaji haiwan. Produk belum diuji. Penyataan diambil daripada bahan/produk yang mempunyai struktur dan komposisi yang sama.

Ketoksikan pembiakan

Maklumat tentang : Ammonium hidrogenkarbonat

Penilaian ketoksikan pembiakan:

Kajian secara saintifiknya tidak wajar.

Maklumat tentang : Ammonium karbamat

Penilaian ketoksikan pembiakan:

Kajian secara saintifiknya tidak wajar.

Bahaya penyedutan

Tiada data diperoleh.

12. Maklumat Ekologi**Keekotoksikan**

Penilaian ketoksikan akuatik:

Amat memudaratkan organisma akuatik

Amat memudaratkan organisma akuatik Perencatan aktiviti degradasi di dalam enap cemar yang diaktifkan tidak dijangka akan berlaku semasa bahan berkepekatan rendah dimasukkan kedalam loji rawatan biologi. Produk belum diuji. Penyataan diambil daripada ciri setiap komponen.

Ketoksikan kepada ikan:

LC50 (96 h) 61 mg/l, *Oncorhynchus mykiss* (Alirkan.)

Data penulisan.

Invertebrat air:

EC50 (48 h) 63.7 mg/l, *Daphnia magna* (Garis panduan OECD 202, Bahagian 1, statik)

Kepekatan nominal

Tumbuhan akuatik:

EC50 (72 h) 75.9 mg/l (jisim-bio), *Desmodesmus subspicatus* (DIN 38412 Bahagian 9, statik)

Mikroorganisma/Kesan ke atas enap cemar diaktifkan:

EC20 (0.5 h) 1,000 mg/l, activated sludge, domestic, non-adapted (Garis panduan OECD 209, akuatik)

Mobiliti

Penilaian pengangkutan di antara bahagian di persekitaran:

Penjerapan kepada fasa tanah pejal tidak dijangka

Potensi Biotumpukan

Potensi Biotumpukan:

Tidak dijangka terakumulasi dalam organisma.

Maklumat tambahan

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Nasihat ekotoksikologi lain:

Perencatan aktiviti degradasi dalam enap cemar diaktifkan tidak dijangka jika memulakannya dengan betul pada kepekatan rendah.

13. Maklumat Pelupusan

Ujian untuk kegunaan pertanian

14. Maklumat Pengangkutan

Pengangkutan domestik:

Tidak dikelaskan sebagai berbahaya di bawah peraturan pengangkutan

Pengangkutan laut
IMDG

Tidak dikelaskan sebagai berbahaya di bawah peraturan pengangkutan

Pengangkutan udara
IATA/ICAO

Tidak dikelaskan sebagai berbahaya di bawah peraturan pengangkutan

Pengangkutan secara pukal menurut Lampiran II MARPOL dan IBC

Peraturan:	Tidak dinilai
Penghantaran yang diluluskan:	Tidak dinilai
Nama pencemaran:	Tidak dinilai
Kategori pencemaran:	Tidak dinilai
Jenis Kapal:	Tidak dinilai

Maklumat lanjut

Rencana kebangsaan tertentu bagi peraturan pengangkutan mesti

15. Maklumat Pengawalseliaan

Peraturan-Peraturan Keselamatan dan Kesihatan Pekerjaan (Pengelasan, Pelabelan dan Helaian Data Keselamatan Bahan kimia Berbahaya) 2013

Akta OSHA 1994 dan peraturan berkaitan

Akta Kualiti Alam Sekeliling 1974

Maklumat tentang peraturan-peraturan tidak meliputi kesemuanya. Peraturan-peraturan lain mungkin dikenakan kepada bahan ini.

Peraturan lain

Jika maklumat peraturan lain yang berkenaan tidak dinyatakan dibahagian lain didalam risalah data keselamatan ini, ianya akan dinyatakan bahagian ini.

16. Maklumat lain

Tarikh Penyediaan / Tarikh Penyemakan: 15.04.2023

Sumber Maklumat dan Rujukan :

SDS ini disediakan dengan menggunakan data dan maklumat tersimpan di dalam sistem berasaskan IT dalaman kami dan dibekalkan oleh pembekal perkhidmatan syarikat kami.

Singkatan Petunjuk:

ATE - Anggaran Ketoksikan Akut

GHS - Sistem Terharmoni Global

IATA / ICAO - Persatuan Pengangkutan Udara Antarabangsa / Organisasi Penerbangan Awam Antarabangsa

IBC - Kontena Pukul Pertengahan

IMDG - Barangan Merbahaya Kelautan Antarabangsa

LC - Kepekatan Maut

LD - Dos Maut

OECD - Organisasi Untuk Kerjasama dan Pembangunan Ekonomi

OEL - Had Pendedahan Pekerjaan

OSHA - Akta Keselamatan dan Kesihatan Pekerjaan

STOT - Ketoksikan Organ Sasaran Khusus

Sebarang tujuan penggunaan lain hendaklah dibincangkan dengan pengeluar.

Teks penuh pengelasan, simbol bahaya dan pernyataan bahaya, jika dinyatakan dalam seksyen 2 atau 3:

Bhn. Ltp. T. Stab.	Bahan letup tidak stabil
Bhn. Ltp. 1.1	Bahan letup divisyen 1.1
Bhn. Ltp. 1.2	Bahan letup divisyen 1.2
Bhn. Ltp. 1.3	Bahan letup divisyen 1.3
Bhn. Ltp. 1.4	Bahan letup divisyen 1.4
Bhn. Ltp. 1.5	Bahan letup divisyen 1.5
Bhn. Ltp. 1.6	Bahan letup divisyen 1.6
Gas M. Bkr 1	Gas mudah terbakar kategori 1
Gas M. Bkr 2	Gas mudah terbakar kategori 2
Aerosol M. Bkr1	Aerosol mudah terbakar kategori 1
Aerosol M. Bkr 2	Aerosol mudah terbakar kategori 2
Cec. M. Bkr 1	Cecair mudah terbakar kategori 1
Cec. M. Bkr 2	Cecair mudah terbakar kategori 2
Cec. M. Bkr 3	Cecair mudah terbakar kategori 3
Pep. M. Bkr 1	Pepejal mudah terbakar kategori 1
Pep. M. Bkr 2	Pepejal mudah terbakar kategori 2
Gas Oks. 1	Gas mengoksida kategori 1
Cec. Oks. 1	Cecair mengoksida kategori 1
Cec. Oks. 2	Cecair mengoksida kategori 2
Cec. Oks. 3	Cecair mengoksida kategori 3

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Pep. Oks. 1	Pepejal mengoksida kategori 1
Pep. Oks. 2	Pepejal mengoksida kategori 2
Pep. Oks. 3	Pepejal mengoksida kategori 3
Gas Tkn.	Gas di bawah tekanan
Swareak. A	Bahan kimia swareaktif jenis A
Swareak. B	Bahan kimia swareaktif jenis B
Swareak. CD	Bahan kimia swareaktif jenis C dan D
Swareak. EF	Bahan kimia swareaktif jenis E dan F
Swareak. G	Bahan kimia swareaktif jenis G
Cec. Pir. 1	Cecair piroforik kategori 1
Pep. Pir. 1	Pepejal piroforik kategori 1
Swapanas. 1	Bahan kimia swapanasan kategori 1
Swapanas. 2	Bahan kimia swapanasan kategori 2
Tdk. Bls. Air 1	Bahan kimia yang, jika terkena air, membebaskan gas mudah terbakar kategori 1
Tdk. Bls. Air 2	Bahan kimia yang, jika terkena air, membebaskan gas mudah terbakar kategori 2
Tdk. Bls. Air 3	Bahan kimia yang, jika terkena air, membebaskan gas mudah terbakar kategori 3
Peroks. Org. A	Peroksida organik jenis A
Peroks. Org. B	Peroksida organik jenis B
Peroks. Org. CD	Peroksida organik jenis C and D
Peroks. Org. EF	Peroksida organik jenis E and F
Peroks. Org. G	Peroksida organik jenis G
Kakis. Log. 1	Mengakis logam kategori 1
Toks. Akut 1	Ketoksikan akut kategori 1
Toks. Akut 2	Ketoksikan akut kategori 2
Toks. Akut 3	Ketoksikan akut kategori 3
Toks. Akut 4	Ketoksikan akut kategori 4
Kks. Kulit 1A	Kakisan atau kerengsaan kulit kategori 1A
Kks. Kulit 1B	Kakisan atau kerengsaan kulit kategori 1B
Kks. Kulit 1C	Kakisan atau kerengsaan kulit kategori 1C
Kreng. Kulit 2	Kakisan atau kerengsaan kulit kategori 2
Kros. Mata 1	Kerosakan mata atau kerengsaan mata yang serius kategori 1
Kreng. Mata 2	Kerosakan mata atau kerengsaan mata yang serius kategori 2
Pem. Naf. 1	Pemekaan pernafasan kategori 1
Pem. Kulit 1	Pemekaan kulit kategori 1
Muta. 1A	Kemutagenan sel germa kategori 1A
Muta. 1B	Kemutagenan sel germa kategori 1B
Muta. 2	Kemutagenan sel germa kategori 2
Kars. 1A	Kekarsinogenan kategori 1A
Kars. 1B	Kekarsinogenan kategori 1B
Kars. 2	Kekarsinogenan kategori 2
Pemb. 1A	Ketoksikan pembiakan kategori 1A
Pemb. 1B	Ketoksikan pembiakan kategori 1B
Pemb. 2	Ketoksikan pembiakan kategori 2
Laktasi	Kesan ke atas atau melalui penyusuan
STOT SE 1	Ketoksikan organ sasaran khusus - pendedahan tunggal kategori 1
STOT SE 2	Ketoksikan organ sasaran khusus - pendedahan tunggal kategori 2
STOT SE 3	Ketoksikan organ sasaran khusus - pendedahan tunggal kategori 3
STOT RE 1	Ketoksikan organ sasaran khusus - pendedahan berulang kategori 1
STOT RE 2	Ketoksikan organ sasaran khusus - pendedahan berulang kategori 2
Bhy. Asp.	Bahaya aspirasi kategori 1
Akuatik Akut 1	Berbahaya kepada persekitaran akuatik – bahaya akut kategori 1

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Akuatik Kronik 1	Berbahaya kepada persekitaran akuatik – bahaya kronik kategori 1
Akuatik Kronik 2	Berbahaya kepada persekitaran akuatik – bahaya kronik kategori 2
Akuatik Kronik 3	Berbahaya kepada persekitaran akuatik – bahaya kronik kategori 3
Akuatik Kronik 4	Berbahaya kepada persekitaran akuatik – bahaya kronik kategori 4
Ozon	Berbahaya bagi lapisan ozon kategori 1

Garis menegak pada margin sebelah kiri tangan menunjukkan pindaan dari versi sebelumnya.

Data yang terdapat dalam risalah data keselamatan ini adalah berdasarkan pengetahuan dan pengalaman kami, dan menerangkan tentang produk yang berkaitan dengan keperluan keselamatan sahaja. Data tidak menyatakan ciri produk (spesifikasi produk). Data dalam risalah data keselamatan ini juga tidak menyatakan apa-apa ciri khusus atau kesesuaian produk yang dipersetujui untuk apa-apa tujuan tertentu. Penerima produk bertanggungjawab untuk memastikan bahawa apa-apa hak pemilikan serta undang-undang dan perundangan sedia ada dipatuhi.

1. Identification of the chemical and of the supplier

Ammonium carbonate Food Grade (E503i)

Use: food additive(s)

Recommended use of the chemical and restriction on use:

Recommended use: food additive(s), Raw material

Company:

BASF (Malaysia) Sdn Bhd
Lot 19.02 Level 19, 1 Powerhouse
No 1 Persiaran Bandar Utama
47800 Petaling Jaya
Selangor D.E, MALAYSIA
Telephone: +60 3 7612 1888
Telefax number: +60 3 7612 1777

Emergency information:

National emergency number:

+603 7612 1999

International emergency number:

Telephone: +49 180 2273-112

2. Hazard identification

Classification of the substance and mixture:

Acute Tox. 4 (oral)

Eye Dam./Irrit. 2

For the classifications not written out in full in this section the full text can be found in section 16.

Label elements and precautionary statement:

Pictogram:



Signal Word:

Warning

Hazard Statement:

H319

Causes serious eye irritation.

H302

Harmful if swallowed.

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Precautionary Statements (Prevention):

P280 Wear eye protection.

P270 Do not eat, drink or smoke when using this product.

Precautionary Statements (Response):

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P330 Rinse mouth.

Precautionary Statements (Disposal):

P501 Dispose of contents and container to hazardous or special waste collection point.

Other hazards which do not result in classification:

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

Irritating to eyes, respiratory system and skin (dust).

The product does not contain a substance above legal limits fulfilling the PBT

(persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

3. Composition/information on ingredients

Chemical nature

Preparation based on: ammonium carbamate, ammonium hydrogencarbonate

H₂CO₃ . x NH₃

CAS: 10361-29-2 EINECS: 233-786-0

Hazardous ingredients

ammonium carbamate

Content (W/W): 50 %

CAS Number: 1111-78-0

Acute Tox. 4 (oral)

Eye Dam./Irrit. 1

ammonium hydrogencarbonate

Content (W/W): 50 %

CAS Number: 1066-33-7

Acute Tox. 4 (oral)

For the classifications not written out in full in this section the full text can be found in section 16.

4. First-Aid Measures

If inhaled:

After inhalation of decomposition products: Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Wash thoroughly with soap and water

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Note to physician:

Symptoms: Overexposure may cause:, vomiting, dyspnea, nausea, coughing

Note to physician:

Treatment: After inhalation of decomposition products: Pulmonary odema prophylaxis. Treat according to symptoms (decontamination, vital functions), no known specific antidote, administer corticosteroid dose aerosol to prevent pulmonary odema.

5. Fire-Fighting Measures

Suitable extinguishing media:

water spray, carbon dioxide, foam

Specific hazards:

ammonia, carbon dioxide

The substances/groups of substances mentioned can be released in case of fire.

Further information:

Product itself is non-combustible; fire extinguishing method of surrounding areas must be considered.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

Breathing protection required. Ensure suitable air extract/ventilation during cleaning/emptying of process machinery.

Environmental precautions:

Do not discharge into drains/surface waters/groundwater.

Methods for cleaning up or taking up:

For residues: Sweep/shovel up.

Avoid raising dust.

7. Handling and Storage

Handling

Breathing must be protected when large quantities are decanted without local exhaust ventilation. Processing machines must be fitted with local exhaust ventilation. Avoid dust formation.

Protection against fire and explosion:

Store in a cool place. If heated the drums can burst due to pressure build-up.

Storage

Segregate from nitrites and alkaline substances. Storage and transport only combined with food materials or food additives. Separate from flavoring agents.

Do not store with: sodium nitrate, sodium nitrite

Suitable materials for containers: Aluminium, High density polyethylene (HDPE), glass, Low density polyethylene (LDPE), Stainless steel 1.4541, Stainless steel 1.4571, enamelled, rubberized

Further information on storage conditions: Keep container in a well-ventilated place. Keep container dry.

Storage stability:

Storage temperature: < 30 °C

The stated storage temperature should be noted.

Protect from temperatures above: 30 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

8. Exposure controls and personal protection

Components with occupational exposure limits

No substance specific occupational exposure limits known.

Personal protective equipment

Respiratory protection:

Suitable respiratory protection for lower concentrations or short-term effect: Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1 or FFP1) Suitable respiratory protection for higher concentrations or long-term effect: Self-contained breathing apparatus.

Hand protection:

Chemical resistant protective gloves (EN ISO 374-1)

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):

polyvinylchloride (PVC) - 0.7 mm coating thickness

chloroprene rubber (CR) - 0.5 mm coating thickness

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Manufacturer's directions for use should be observed because of great diversity of types.

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Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Do not breathe dust. At the end of the shift the skin should be cleaned and skin-care agents applied.

9. Physical and Chemical Properties

Form:	crystalline, powder	
Colour:	white	
Odour:	strong, ammonia-like	
Odour threshold:	No data available., not determined	
pH value:	9 (100 g/l, 20 °C)	(pH Meter)
Melting point:	not applicable The substance / product decomposes.	
Boiling range:	Study technically not feasible., The substance / product decomposes therefore not determined.	
Flash point:	not applicable, the product is a solid	
Evaporation rate:	negligible, The product is a non- volatile solid.	
Flammability (solid/gas):	not highly flammable	(Regulation 440/2008/EC, A.10)
Lower explosion limit:	For solids not relevant for classification and labelling.	
Upper explosion limit:	For solids not relevant for classification and labelling.	
Ignition temperature:	The substance / product decomposes therefore not determined.	
Thermal decomposition:	> 59 °C To avoid thermal decomposition, do not overheat.	(internal method)
Self ignition:	not self-igniting	

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Self heating ability:	It is not a substance capable of spontaneous heating.	
Explosion hazard:	not explosive	
Fire promoting properties:	not fire-propagating	
Vapour pressure:	69 mbar (20 °C) Literature data. 188 mbar (30 °C) Literature data.	
Density:	approx. 1.6 g/cm ³ (20 °C)	(OECD Guideline 109)
Bulk density:	780 - 830 kg/m ³	(other)
Solubility in water:	320 g/l (20 °C)	
Partitioning coefficient n-octanol/water (log Pow):	-2.4 - -0.47	
Viscosity, dynamic:	not applicable, the product is a solid	
Viscosity, kinematic:	not applicable, the product is a solid	

10. Stability and Reactivity

Conditions to avoid:

Avoid heat. See SDS section 7 - Handling and storage.

Thermal decomposition:	> 59 °C (internal method) To avoid thermal decomposition, do not overheat.
------------------------	---

Substances to avoid:
strong bases

Hazardous reactions:

Exothermic reaction. Reacts with nitrites. Reacts with nitrates.

Hazardous decomposition products:
ammonia, carbon dioxide

Reactivity:

Chemical stability:

11. Toxicological Information

Acute toxicity

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Assessment of acute toxicity:

Of moderate toxicity after single ingestion.

Experimental/calculated data:

LD50 rat (oral): > 1,800 - < 2,150 mg/kg (BASF-Test)

LD50 rat (dermal): > 2,000 mg/kg

No mortality was observed.

Information on: ammonium hydrogencarbonate

Experimental/calculated data:

LC50 rat (by inhalation): > 4.74 mg/l 4.5 h (other)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. An aerosol was tested.

Information on: ammonium carbamate

Experimental/calculated data:

LC50 rat (by inhalation): 6.6 mg/l 4 h (OECD Guideline 403)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Product not examined: Value is calculated from the data of the components.

Irritation

Assessment of irritating effects:

Not irritating to the skin. Eye contact causes irritation.

Experimental/calculated data:

Skin corrosion/irritation rabbit:

The product has not been tested. The statement has been derived from the properties of the individual components.

Serious eye damage/irritation rabbit: Irritant. (OECD Guideline 405)

Information on: ammonium carbamate

Assessment of irritating effects:

May cause severe damage to the eyes. Not irritating to the skin.

Information on: ammonium hydrogencarbonate

Assessment of irritating effects:

Not irritating to the eyes. Not irritating to the skin. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Respiratory/Skin sensitization

Assessment of sensitization:

The chemical structure does not suggest a sensitizing effect.

Germ cell mutagenicity

Assessment of mutagenicity:

No data available concerning mutagenic effects. The chemical structure does not suggest a specific alert for such an effect.

Information on: ammonium hydrogencarbonate

Assessment of mutagenicity:

The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture.

Information on: ammonium carbamate

Assessment of mutagenicity:

Mutagenicity tests revealed no genotoxic potential. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Carcinogenicity

Information on: ammonium hydrogencarbonate

Assessment of carcinogenicity:

The whole of the information assessable provides no indication of a carcinogenic effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: ammonium carbamate

Assessment of carcinogenicity:

Did not show carcinogenic effects in animal experiments. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Reproductive toxicity

Information on: ammonium hydrogencarbonate

Assessment of reproduction toxicity:

Study scientifically not justified.

Information on: ammonium carbamate

Assessment of reproduction toxicity:

Study scientifically not justified.

Aspiration hazard

No data available.

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:

Acutely harmful for aquatic organisms.

Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. The

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product has not been tested. The statement has been derived from the properties of the individual components.

Toxicity to fish:

LC50 (96 h) 61 mg/l, *Oncorhynchus mykiss* (Flow through.)

Literature data.

Aquatic invertebrates:

EC50 (48 h) 63.7 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

Nominal concentration.

Aquatic plants:

EC50 (72 h) 75.9 mg/l (biomass), *Desmodesmus subspicatus* (DIN 38412 Part 9, static)

Microorganisms/Effect on activated sludge:

EC20 (0.5 h) 1,000 mg/l, activated sludge, domestic, non-adapted (OECD Guideline 209, aquatic)

Mobility

Assessment transport between environmental compartments:

Adsorption to solid soil phase is not expected.

Bioaccumulation potential

Bioaccumulation potential:

Accumulation in organisms is not to be expected.

Additional information

Other ecotoxicological advice:

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

13. Disposal Information

Test for use in agriculture.

14. Transportation Information

Domestic transport:

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

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Not classified as a dangerous good under transport regulations

Transport in bulk according to Annex II of MARPOL and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

Further information

Specific national features of transport regulations must be observed. They are to be found in the shipping documents.

15. Regulatory Information

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013
OSHA 1994 and relevant regulations
Environmental Quality Act, 1974

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Other regulations

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

Date of Preparation / Date of Revision: 15.04.2023

Information Source and References:

This SDS is prepared using data and information saved in our internal IT-based system and supplied by our company's service providers.

Key Abbreviations:

ATE - Acute Toxicity Estimates
GHS - Globally Harmonized System
IATA / ICAO - International Air Transport Association / International Civil Aviation Organization
IBC - Intermediate Bulk Container
IMDG - International Maritime Dangerous Goods
LC - Lethal Concentration
LD - Lethal Dose
OECD - Organisation for Economic Co-operation and Development
OEL - Occupational Exposure Limit
OSHA - Occupational Safety and Health Act
STOT - Specific Target Organ Toxicity

Any other intended applications should be discussed with the manufacturer.

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Unst. Expl.	Unstable explosives
Expl. 1.1	Explosives division 1.1
Expl. 1.2	Explosives division 1.2
Expl. 1.3	Explosives division 1.3
Expl. 1.4	Explosives division 1.4
Expl. 1.5	Explosives division 1.5
Expl. 1.6	Explosives division 1.6
Flam. Gas 1	Flammable gases category 1
Flam. Gas 2	Flammable gases category 2
Flam. Aerosol 1	Flammable aerosols category 1
Flam. Aerosol 2	Flammable aerosols category 2
Flam. Liq. 1	Flammable liquids category 1
Flam. Liq. 2	Flammable liquids category 2
Flam. Liq. 3	Flammable liquids category 3
Flam. Sol. 1	Flammable solids category 1
Flam. Sol. 2	Flammable solids category 2
Ox. Gas 1	Oxidizing gases category 1
Ox. Liq. 1	Oxidizing liquids category 1
Ox. Liq. 2	Oxidizing liquids category 2
Ox. Liq. 3	Oxidizing liquids category 3
Ox. Sol. 1	Oxidizing solids category 1
Ox. Sol. 2	Oxidizing solids category 2
Ox. Sol. 3	Oxidizing solids category 3
Press. Gas	Gases under pressure
Self-react. A	Self-reactive chemicals type A
Self-react. B	Self-reactive chemicals type B
Self-react. CD	Self-reactive chemicals type C and D
Self-react. EF	Self-reactive chemicals type E and F
Self-react. G	Self-reactive chemicals type G
Pyr. Liq. 1	Pyrophoric liquids category 1
Pyr. Sol. 1	Pyrophoric solids category 1
Self-heat. 1	Self-heating chemicals category 1
Self-heat. 2	Self-heating chemicals category 2
Water-react. 1	Chemicals which, if in contact with water, emits flammable gases category 1
Water-react. 2	Chemicals which, if in contact with water, emits flammable gases category 2
Water-react. 3	Chemicals which, if in contact with water, emits flammable gases category 3
Org. Perox. A	Organic peroxides type A
Org. Perox. B	Organic peroxides type B
Org. Perox. CD	Organic peroxides type C and D
Org. Perox. EF	Organic peroxides type E and F
Org. Perox. G	Organic peroxides type G
Met. Corr. 1	Corrosive to metals category 1
Acute Tox. 1	Acute toxicity category 1
Acute Tox. 2	Acute toxicity category 2
Acute Tox. 3	Acute toxicity category 3

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Acute Tox. 4	Acute toxicity category 4
Skin Corr. 1A	Skin corrosion or irritation category 1A
Skin Corr. 1B	Skin corrosion or irritation category 1B
Skin Corr. 1C	Skin corrosion or irritation category 1C
Skin Irrit. 2	Skin corrosion or irritation category 2
Eye Dam. 1	Serious eye damage or eye irritation category 1
Eye Irrit. 2	Serious eye damage or eye irritation category 2
Resp. Sens. 1	Respiratory sensitization category 1
Skin Sens. 1	Skin sensitization category 1
Muta. 1A	Germ cell mutagenicity category 1A
Muta. 1B	Germ cell mutagenicity category 1B
Muta. 2	Germ cell mutagenicity category 2
Carc. 1A	Carcinogenicity category 1A
Carc. 1B	Carcinogenicity category 1B
Carc. 2	Carcinogenicity category 2
Repr. 1A	Reproductive toxicity category 1A
Repr. 1B	Reproductive toxicity category 1B
Repr. 2	Reproductive toxicity category 2
Lact.	Effect on or via lactation
STOT SE 1	Specific target organ toxicity – single exposure category 1
STOT SE 2	Specific target organ toxicity – single exposure category 2
STOT SE 3	Specific target organ toxicity – single exposure category 3
STOT RE 1	Specific target organ toxicity – repeated exposure category 1
STOT RE 2	Specific target organ toxicity – repeated exposure category 2
Asp. Haz.	Aspiration hazard category 1
Aquatic Acute 1	Hazardous to the aquatic environment – acute hazard category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – chronic hazard category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – chronic hazard category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – chronic hazard category 3
Aquatic Chronic 4	Hazardous to the aquatic environment – chronic hazard category 4
Ozone	Hazardous to the ozone layer category 1

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.