HIT-RE 500 V3

en	This safety data sheet file is issued for the following production lots: 1. Version 2.5 is valid for HIT-RE 500 V3 with a maximum expiration date of 12/2024 (see foil pack manifold) 2. Version 3.0 is valid for HIT-RE 500 V3 with a minimum expiration date of 01/2025 (see the foil pack manifold)
de	Diese Sicherheitsdatenblatt-Datei betrifft die folgenden Fertigungslose: 1. Version 2.5 ist gültig für HIT-RE 500 V3 mit einem Haltbarkeitsdatum bis 12/2024 (siehe Verbindungsteil) 2. Version 3.0 ist gültig für HIT-RE 500 V3 mit einem Haltbarkeitsdatum ab 01/2025 (siehe Verbindungsteil)
nl	Dit veiligheidsinformatiebladbestand wordt afgegeven voor de volgende productie-lots: 1. Versie 2.5 is geldig voor HIT-RE 500 V3 met een maximale houdbaarheidsdatum tot 12/2024 (zie foliepak verdeler) 2. Versie 3.0 is geldig voor HIT-RE 500 V3 met een minimale houdbaarheidsdatum tot 01/2025 (zie foliepak verdeler)
fr	Ce fichier de données de sécurité est délivré pour les lots de production suivants : 1. La version 2.5 est valide pour HIT-RE 500 V3 avec une date d'expiration maximale de 12/2024 (voir le raccord de cartouche souple) 2. La version 3.0 est valide pour HIT-RE 500 V3 avec une date d'expiration maximale de 01/2025 (voir le raccord de cartouche souple)
da	Denne sikkerhedsdatabladsfil er udgivet for følgende produktions lots: 1. Version 2.5 er gældende for HIT-RE 500 V3 med en maksimal udløbsdato d. 12/2024 (se foliepakkens manifold) 2. Version 3.0 er gældende for HIT-RE 500 V3 med en mindste udløbsdato d. 01/2025 (se foliepakkens manifold)
sv	Denna säkerhetsdatabladsfil har utfärdats för följande tillverkningspartier: 1. Version 2.5 är giltig för HIT-RE 500 V3 med ett sista giltighetsdatum den 12/2024 (se folieförpackningens grenrör) 2. Version 3.0 är giltig för HIT-RE 500 V3 med ett första giltighetsdatum den 01/2025 (se folieförpackningens grenrör)
fi	Tämä käyttöturvallisuustiedote koskee seuraavia tuotantoeriä: 1. Versio 2.5 koskee HIT-RE 500 V3 -tuotetta, jonka viimeinen käyttöpäivämäärä on 12/2024 tai sitä ennen (ks. foliopakkauksen taite) 2. Versio 3.0 koskee HIT-RE 500 V3 -tuotetta, jonka viimeinen käyttöpäivämäärä on 01/2025 tai sen jälkeen (ks. foliopakkauksen taite)
hu	Ezt a biztonsági adatlapot a következő gyártási tételekhez bocsátják ki: 1. Az 2.5 változat legfeljebb 2024/12 lejárati dátummal érvényes a HIT-RE 500 V3-re (lásd a fóliacsomag sokszorosított iratát) 2. Az 3.0 változat legalább 2025/01 lejárati dátummal érvényes a HIT-RE 500 V3-re (lásd a fóliacsomag sokszorosított iratát)
es	Este archivo de hoja de datos de seguridad se emite para los siguientes lotes de producción: 1. Versión 2.5 válida para HIT-RE 500 V3 con una fecha de caducidad máxima de 12/2024 (consulte el colector de láminas) 2. Versión 3.0 válida para HIT-RE 500 V3 con una fecha de caducidad mínima de 01/2025 (consulte el colector de láminas)
pt	Este ficheiro com ficha de dados de segurança é emitido para os seguintes lotes de produção: 1. A versão 2.5 é válida para a HIT-RE 500 V3 com um prazo máximo de validade até 12/2024 (ver as diversas embalagens) 2. A versão 3.0 é válida para a HIT-RE 500 V3 com um prazo mínimo de validade até 01/2025 (ver as diversas embalagens)
it	Questo file della scheda tecnica di sicurezza è rilasciato per i seguenti lotti di produzione: 1. La versione 2.5 è valida per HIT-RE 500 V3 con data di scadenza massima 12/2024 (vedere la giunzione della confezione) 2. La versione 3.0 è valida per HIT-RE 500 V3 con data di scadenza minima 01/2025 (vedere la giunzione della confezione)
pl	Ten plik arkusza danych bezpieczeństwa jest wydany dla następujących części produkcyjnych: 1. Wersja 2.5 obowiązuje w przypadku HIT-RE 500 V3 z maksymalnym dniem rozpoczęcia pracy 12/2024 (patrz opakowanie foliowe) 2. Wersja 3.0 obowiązuje w przypadku HIT-RE 500 V3 z minimalnym dniem rozpoczęcia pracy 01/2025 (patrz opakowanie foliowe)
ru	Этот файл сертификата безопасности предоставлен для следующих партий продукции: 1. Версия 2.5 действительна для HIT-RE 500 V3 с максимальным сроком годности до 12.2024 г. (см. присоединительную часть на капсуле) 2. Версия 3.0 действительна HIT-RE 500 V3 с минимальным сроком годности до 01.2025 г. (см. присоединительную часть на капсуле)
el	Το παρόν δελτίο δεδομένων ασφάλειας εκδίδεται για τις ακόλουθες παρτίδες παραγωγής: 1. Η έκδοση 2.5 ισχύει για το HIT-RE 500 V3 με μέγιστη ημερομηνία λήξης τον 12/2024 (βλέπε διανομέα συσκευασίας μεμβράνης) 2. Η έκδοση 3.0 ισχύει για το HIT-RE 500 V3 με ελάχιστη ημερομηνία λήξης τον 01/2025 (βλέπε τον διανομέα της συσκευασίας μεμβράνης)
cs	Tento soubor s bezpečnostním listem je vystaven pro tyto výrobní závody 1. Verze 2.5 je platná pro HIT-RE 500 V3 s maximálním datem expirace 12/2024 (viz fólie balení) 2. Verze 3.0 je platná pro HIT-RE 500 V3 s minimálním datem expirace 01/2025 (viz fólie balení)
bg	Този информационен лист за безопасност се публикува за следните производствени партиди: 1. Версия 2.5 е валидна за HIT-RE 500 V3 с максимален срок на валидност до 12.2024 г. (вж. фолийна опаковка за колектор) 2. Версия 3.0 е валидна за HIT-RE 500 V3 с минимален срок на изтичане 01.2025 г. (вж. фолийна опаковка за колектор)
lv	Šo drošības datu lapa ir izsniegta šādām ražojumu partijām: 1. Versija 2.5 ir derīga izstrādājumam HIT-RE 500 V3, kura maksimālais derīguma termiņš ir 2024. gada maijs (skatīt folija iepakojuma kolektoru) 2. Versija 3.0 ir derīga izstrādājumam HIT-RE 500 V3, kura minimālais derīguma termiņš ir 2025. gada jūnijs (skatīt folija iepakojuma kolektoru)
lt	Šis saugos duomenų lapo failas išduodamas šioms gamybos partijoms: 1. 2.5 versija galioja HIT-RE 500 V3, kurios maksimali galiojimo data – 2024-12 (žr. folinių pakuočių rinkinį) 2. 3.0 versija galioja HIT-RE 500 V3, kurios minimali galiojimo data – 2025-01 (žr. folinių pakuočių rinkinį)
sk	Tento súbor bezpečnostných údajov sa vydáva pre tieto výrobné šarže: 1. Verzia 2.5 je platná pre HIT-RE 500 V3 s maximálnym dátumom exspirácie 12/2024 (pozrite si údaj na fólii balenia) 2. Verzia 3.0 je platná pre HIT-RE 500 V3 s minimálnym dátumom exspirácie 01/2025 (pozrite si údaj na fólii balenia)
sl	Datoteka z varnostnim listom je izdana za naslednje proizvodne serije: 1. Različica 2.5 je veljavna za izdelek HIT-RE 500 V3 z maksimalnim datumom poteka veljavnosti: 12/2024 (glejte pakiranje) 2. Različica 3.0 je veljavna za izdelek HIT-RE 500 V3 z minimalnim datumom poteka veljavnosti: 01/2025 (glejte pakiranje)

HIT-RE 500 V3

et	See ohutuskaardi fail on välja antud järgmistele tootepartiidele: 1. Versioon 2.5 kehtib tootele HIT-RE 500 V3 viimase säilimiskuupäevaga 12/2024 (vt fooliumpakendi hargnemiskohta) 2. Versioon 3.0 kehtib tootele HIT-RE 500 V3 esimese säilimiskuupäevaga 01/2025 (vt fooliumpakendi hargnemiskohta)
ro	Acest fișier cu date tehnice de securitate este emis pentru următoarele locuri de producție: 1. Versiunea 2.5 este valabilă pentru HIT-RE 500 V3 cu data maximă de expirare 12/2024 (a se vedea racordul pentru cartușe din folie) 2. Versiunea 3.0 este valabilă pentru HIT-RE 500 V3 cu data minimă de expirare 01/2025 (a se vedea racordul pentru cartușe din folie)
hr	Ovaj sigurnosno-tehnički list izdaje se za sljedeće proizvodne serije: 1. Verzija 2.5 vrijedi za HIT-RE 500 V3 s maksimalnim rokom trajanja do 12/2024 (vidjeti razvodnik iz folije) 2. Verzija 3.0 vrijedi za HIT-RE 500 V3 s minimalnim rokom trajanja do 01/2025 (vidjeti razvodnik iz folije)
tr	Bu güvenlik bilgi formu dosyası aşağıdaki üretim partileri için hazırlanmıştır: 1. Versiyon 2.5, maksimum son kullanma tarihi 12/2024 olan HIT-RE 500 V3 için geçerlidir (bkz. folyo paketi manifoldu) 2. Versiyon 3.0, inimumm son kullanma tarihi 01/2025 olan HIT-RE 500 V3 için geçerlidir (bkz. folyo paketi manifoldu)
uk	Цей файл сертифіката безпеки надано для наступних партій продукції: 1. Версія 2.5 дійсна для HIT-RE 500 V3 з максимальним терміном придатності до 12.2024 р. (див. приєднувальну частину на капсулі) 2. Версія 3.0 дійсна для HIT-RE 500 V3 з мінімальним терміном придатності до 01.2025 р. (див. приєднувальну частину на капсулі)
zh	**本安全数据表文件**针对以下生产批次发布： 1. **版本** 2.5 对 HIT-RE 500 V3 **有效，最**长失效日期为 2024 **年** 12 **月**（参见箔包装歧管） 2. **版本** 3.0 对 HIT-RE 500 V3 **有效，最短失效日期**为 2025 **年** 1 **月**（参见箔包装歧管）
ar	يتم إصدار ملف صحيفة بيانات السلامة لتشغيلات الإنتاج التالية: 1. الإصدار 2.5 صالح لـ HIT-RE 500 V3 بحد أقصى لتاريخ انتهاء الصلاحية هو 2024/12 (انظر العبوة المصنوعة من رقائق الألومنيوم) 2. الإصدار 3.0 صالح لـ HIT-RE 500 V3 على الأقل لتاريخ انتهاء الصلاحية هو 2025/1 (انظر العبوة المصنوعة من رقائق الألومنيوم)
ja	この安全性データシートファイルは、次の生産ロット用に発行されています： 1. バージョン 2.5 は、有効期限が最大 2024 年 12 月までの HIT-RE 500 V3 に対して有効です (フォイルパック連結部に表示) 2. バージョン 3.0 は、有効期限が 2025 年 1 月以降の HIT-RE 500 V3 に対して有効です (フォイルパック連結部に表示)
sr	Datoteka bezbednosnog lista se izdaje za sledeće proizvodne serije: 1. Verzija 2.5 je dostupna za HIT-RE 500 V3 sa maksimalnim datumom isteka 12/2024 (pogledajte ivicu pakovanja od folije) 2. Verzija 3.0 je dostupna za HIT-RE 500 V3 sa minimalnim datumom isteka 01/2025 (pogledajte ivicu pakovanja od folije)
ms	Fail helaian data keselamatan ini dikeluarkan untuk lot pengeluaran yang berikut: 1. Versi 2.5 adalah sah untuk HIT-RE 500 V3 dengan tarikh tamat tempoh maksimum pada 12/2024 (lihat manifold pek kerajang) 2. Versi 3.0 adalah sah untuk HIT-RE 500 V3 dengan tarikh tamat tempoh minimum pada 01/2025 (lihat manifold pek kerajang)
ko	본 안전보건자료는 다음 제품 로트에 대해 발급되었습니다. 1. 버전 2.5(은)는 HIT-RE 500 V3에 대해 유효하며, 최대 만료 기한은 2024년 12월입니다(호일 팩 매니폴드 참조) 2. 버전 3.0(은)는 HIT-RE 500 V3에 대해 유효하며, 최소 만료 기한은 2025년 1월입니다(호일 팩 매니폴드 참조)
id	File lembar data keselamatan ini diterbitkan untuk lot produksi berikut: 1. Versi 2.5 berlaku untuk HIT-RE 500 V3 dengan tanggal kedaluwarsa maksimum 12/2024 (lihat foil pack manifold) 2. Versi 3.0 berlaku untuk HIT-RE 500 V3 dengan tanggal kedaluwarsa minimum 01/2025 (lihat foil pack manifold)
he	קובץ גיליון נתוני בטיחות זה מונפק עבור מגרשי הייצור הבאים: 1. גרסה 2.5 תקפה ל-HIT-RE 500 V3 עם תאריך תפוגה מקסימלי של 12/2024 (ראה יריעת foil pack) 2. גרסה 3.0 תקפה ל-HIT-RE 500 V3 עם תאריך תפוגה מינימלי של 01/2025 (ראה יריעת foil pack)
th	แผ่นข้อมูลด้านความปลอดภัยนี้ที่ได้จัดทำสำหรับล็อตการผลิตดังต่อไปนี้: 1. เวอร์ชั่น 2.5 ใช้ได้กับ HIT-RE 500 V3 ที่มีวันหมดอายุไม่เกิน 12/2024 (โปรดดูแผ่นพับห่อฟอยล์) 2. เวอร์ชั่น 3.0 ใช้ได้กับ HIT-RE 500 V3 ที่มีวันหมดอายุขั้นต่ำ 01/2025 (โปรดดูแผ่นพับห่อฟอยล์)
vi	Tệp bảng dữ liệu an toàn này được phát hành cho các lô sản xuất sau: 1. Phiên bản 2.5 hợp lệ cho HIT-RE 500 V3 với ngày hết hạn tối đa là 12/2024 (xem ống keo cấy thép) 2. Phiên bản 3.0 hợp lệ cho HIT-RE 500 V3 với ngày hết hạn tối thiểu là 01/2025 (xem ống keo cấy thép)
zh tw	**下列生**產批次將獲核發本安全資料表檔案： 1. 2.5 **版適用於** HIT-RE 500 V3，**最長到期日** 12/2024 (**請見鋁箔包打字紙**) 2. 3.0 **版適用於** HIT-RE 500 V3，**最短到期日** 01/2025 (**請見鋁箔包打字紙**)
kk	Бұл қауіпсіздік паспорты мына өндірістік партиялар үшін шығарылады: 1. 2.5 нұсқасы жарамдылық мерзімі көп уақытты (12/2024) қамтитын HIT-RE 500 V3 үшін жарамды (жұқалтыр қаптаманы қараңыз) 2. 3.0 нұсқасы жарамдылық мерзімі аз уақытты (01/2025) қамтитын HIT-RE 500 V3 үшін жарамды (жұқалтыр қаптаманы қараңыз)

HIT-RE 500 V3

Safety information for 2-Component-products

Issue date: 08/12/2022 Revision date: 08/12/2022 Supersedes: 13/05/2020 Version: 3.0

SECTION 1: Kit identification

1.1 Product identifier

Product name	HIT-RE 500 V3
	
Product code	BU Anchor

1.2 Details of the supplier of the Safety information for 2-Component-products

Hilti Taiwan Co., Ltd.
24/F, No. 16, Xinzhan Road, Banqiao Dist.
220 New Taipei City - Taiwan
T +886 2 6630 0345;
0800 221 036 Toll Free - F +886 2 2950 6132
twcs@hilti.com

SECTION 2: General information

Storage	Storage temperature : 5 - 25 ° C

A SDS for each of these components is included. Please do not separate any component SDS from this cover page

This Kit should be handled in accordance with good laboratory practices and appropriate personal protective equipment should be used

SECTION 3: Kit contents

Classification of the Product

Classification according to the United Nations GHS (Rev. 4, 2011)

Health hazards	Acute toxicity (Oral), Category 5 Skin corrosion, Category 1B Serious eye damage/eye irritation, Category 1 Skin sensitization, Category 1 Specific target organ toxicity - Single exposure, Category 3, Respiratory tract irritation
Environmental hazards	Hazardous to the aquatic environment - Acute Hazard, Category 2 Hazardous to the aquatic environment - Chronic Hazard, Category 2

Other hazards not mentioned above are Not applicable or No data is available.

Label elements

HIT-RE 500 V3

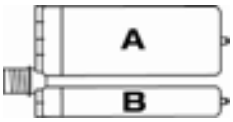
Safety information for 2-Component-products

Labelling according to the United Nations GHS (Rev. 4, 2011)

Hazard pictograms (GHS TW)	 GHS05 GHS07 GHS09
Signal word (GHS TW)	Danger
Hazardous ingredients	Epoxy resin, Amines
Hazard statements (GHS TW)	H314 - Causes severe skin burns and eye damage. H317 - May cause an allergic skin reaction. H335 - May cause respiratory irritation. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (GHS TW)	P280 - Wear eye protection, protective clothing, protective gloves. P262 - Do not get in eyes, on skin, or on clothing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P302+P352 - IF ON SKIN: Wash with plenty of water. P337+P313 - If eye irritation persists: Get medical advice/attention. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

Additional information

2-component-foilpack, contains:
Component A: Epoxy resin, Reactive diluent, inorganic filler
Component B: Amine hardener, inorganic filler



Name	General description	Quantity	Unit	Classification according to the United Nations GHS (Rev. 4, 2011)
HIT-RE 500 V3, B		1	pcs (pieces)	Acute Tox. 5 (Oral), H303 Skin Corr. 1B, H314 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Acute 2, H401 Aquatic Chronic 3, H412
HIT-RE 500 V3, A		1	pcs (pieces)	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

SECTION 4: General advice

General advice	For professional users only

SECTION 5: Safe handling advice

General measures	Spilled material may present a slipping hazard

Environmental precautions	Prevent entry to sewers and public waters Notify authorities if liquid enters sewers or public waters Avoid release to the environment Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. After curing, the product can be disposed of with household waste.
Storage conditions	Protect from sunlight. Store in a well-ventilated place.
Technical measures	Comply with applicable regulations
Precautions for safe handling	Wear personal protective equipment Avoid contact with skin and eyes Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work Avoid contact during pregnancy/while nursing
Methods for cleaning up	This material and its container must be disposed of in a safe way, and as per local legislation Mechanically recover the product On land, sweep or shovel into suitable containers Store away from other materials.
For containment	Collect spillage.
Incompatible materials	Sources of ignition Direct sunlight
Incompatible products	Strong bases Strong acids

SECTION 6: First aid measures

First-aid measures after eye contact	Get immediate medical advice/attention. Immediately rinse with water for a prolonged period while holding the eyelids wide open Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist
First-aid measures after ingestion	Do not induce vomiting Rinse mouth Immediately call a POISON CENTER/doctor.
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	Wash with plenty of water/… Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get immediate medical advice/attention.
First-aid measures general	Never give anything by mouth to an unconscious person If you feel unwell, seek medical advice (show the label where possible)
Symptoms/effects	Causes severe skin burns and eye damage.
Symptoms/effects after eye contact	Causes serious eye damage.
Symptoms/effects after skin contact	May cause an allergic skin reaction.
Other medical advice or treatment	Treat symptomatically

SECTION 7: Fire fighting measures

Firefighting instructions	Use water spray or fog for cooling exposed containers Exercise caution when fighting any chemical fire Prevent fire fighting water from entering the environment

Protection during firefighting	Self-contained breathing apparatus Do not enter fire area without proper protective equipment, including respiratory protection
Hazardous decomposition products in case of fire	Thermal decomposition generates : Carbon dioxide Carbon monoxide

SECTION 8: Other information

No data available

HIT-RE 500 V3, A

According to Taiwan Ministry of Labour Lao-zhi Shou-tzu No. 10702052242, “Regulations for the Labeling and Hazard Communication of Hazardous Chemicals”

Issue date: 2022/12/08 Revision date: 2022/12/08 Supersedes: 2019/05/13 Version: 3.0

1. Identification of the chemical and of the business entity

Chemical name	HIT-RE 500 V3, A
Product code	BU Anchor
Other Names	-
Recommended use	Composite mortar component for fasteners in the construction industry
Restrictions on use	For professional use only
Names, addresses, and phone numbers of manufacturer, importer or supplier	**Supplier** Hilti Taiwan Co., Ltd. 220 Taiwan New Taipei City 24/F, No. 16, Xinzhan Road, Banqiao Dist. T +886 2 6630 0345; 0800 221 036 Toll Free - F +886 2 2950 6132 twcs@hilti.com **Department issuing data specification sheet** Hilti Entwicklungsgesellschaft mbH 86916 Deutschland Kaufering Hiltistraße 6 T +49 8191 906876 anchor.hse@hilti.com
Emergency number	Schweizerisches Toxikologisches Informationszentrum - 24h Service +41 44 251 51 51 (international) +886 2 2357 9090 0800 221 036 Toll Free

2. Hazard(s) identification

GHS classification (Taiwan)

Health hazards	Skin irritation, Category 2 Serious eye damage/eye irritation, Category 1 Skin sensitization, Category 1
Environmental hazards	Hazardous to the aquatic environment - Acute Hazard, Category 2 Hazardous to the aquatic environment - Chronic Hazard, Category 2

Label content

Hazard pictograms (GHS TW)

GHS05, GHS07, GHS09

Signal word (GHS TW)	Danger
Hazard statements (GHS TW)	(H315) Causes skin irritation (H317) May cause an allergic skin reaction (H318) Causes serious eye damage (H411) Toxic to aquatic life with long lasting effects
Precautionary statements	-
Prevention precautionary statements	(P280) Wear eye protection, protective clothing, protective gloves. (P262) Do not get in eyes, on skin, or on clothing.

Response Precautionary Statements	(P305+P351+P338) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P333+P313) If skin irritation or rash occurs: Get medical advice/attention. (P337+P313) If eye irritation persists: Get medical advice/attention. (P302+P352) IF ON SKIN: Wash with plenty of Water.
Storage precautionary statements	-
Disposal precautionary statements	-
Other hazards which do not result in classification	-

3. Composition/information on ingredients

Substance:

Not applicable

Mixture:

Chemical properties — Refer to Section 9

Name	CAS-No.	Concentration
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (2,2'-[(1-甲基亚乙基)双(4,1-亚苯氧基亚甲基)]双环氧乙烷)	1675-54-3	25 - 40
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (甲醛與環氧氯丙烷及苯酚的寡聚反應產物)	9003-36-5	10 - 20
Trimethylol ethane triglycidyl ether Polymer (Trimethylol ethane triglycidyl ether Polymer)	68460-21-9	5 - 10
butanedioldiglycidyl ether (1,4-丁二醇二縮水甘油醚)	2425-79-8	5 - 10
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	2.5 - 5

4. First-aid measures

First aid measures for different exposure routes

First-aid measures general	Never give anything by mouth to an unconscious person - If you feel unwell, seek medical advice (show the label where possible)
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing. - Allow affected person to breathe fresh air - Allow the victim to rest
First-aid measures after skin contact	Gently wash with plenty of soap and water. - Wash contaminated clothing before reuse. - If skin irritation occurs: Get immediate medical advice/attention.
First-aid measures after eye contact	Rinse immediately with plenty of water - Remove contact lenses, if present and easy to do. Continue rinsing. - Obtain medical attention if pain, blinking or redness persists
First-aid measures after ingestion	Rinse mouth - Get medical advice/attention. - Do not induce vomiting - Obtain emergency medical attention

Most Important Symptoms/Effects

Symptoms/effects after skin contact	Causes skin irritation,May cause an allergic skin reaction.
Symptoms/effects after eye contact	Causes serious eye irritation.

Protection for the first aid staff

Personal Protection in First Aid and Measures	Avoid all unnecessary exposure

Notes to physician

Other medical advice or treatment	Treat symptomatically

5. Firefighting measures

Extinguishing media

Suitable extinguishing media	Water spray Carbon dioxide Dry powder Foam Sand
Unsuitable extinguishing media	Do not use a heavy water stream

Specific hazards arising from firefighting measures

Fire hazard	-
Explosion hazard	-
General measures	Spilled material may present a slipping hazard
Reactivity in case of fire	-
Hazardous decomposition products in case of fire	Thermal decomposition generates : Carbon dioxide. Carbon monoxide.

Specific firefighting methods

Firefighting instructions	Use water spray or fog for cooling exposed containers - Exercise caution when fighting any chemical fire - Prevent fire fighting water from entering the environment

Special protective equipment and precautions for fire-fighters

Protection during firefighting	Self-contained breathing apparatus - Do not enter fire area without proper protective equipment, including respiratory protection
Personal protection (Emergency response)	-

6. Accidental release measures

Personal precautions

General measures	Spilled material may present a slipping hazard

For non-emergency personnel

Emergency procedures	Evacuate unnecessary personnel

For emergency responders

Protective equipment	Use personal protective equipment as required. Equip cleanup crew with proper protection
Emergency procedures	Ventilate area

Environmental precautions

Environmental precautions	Prevent entry to sewers and public waters Notify authorities if liquid enters sewers or public waters Avoid release to the environment Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. After curing, the product can be disposed of with household waste.

Methods and material for containment and cleaning up

For containment	Collect spillage.
Methods for cleaning up	This material and its container must be disposed of in a safe way, and as per local legislation Mechanically recover the product On land, sweep or shovel into suitable containers Store away from other materials.
Other information	Dispose of materials or solid residues at an authorized site

7. Handling and storage

Handling

Precautions for safe handling	Wear personal protective equipment Avoid contact with skin and eyes Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work
Hygiene measures	Do not eat, drink or smoke when using this product. Always wash hands after handling the product Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

Storage

Storage conditions	Protect from sunlight.
Incompatible products	Strong bases Strong acids
Incompatible materials	Sources of ignition Direct sunlight
Storage temperature	5 - 25 ° C
Heat and ignition sources	Keep away from heat and direct sunlight

8. Exposure controls/personal protection

Appropriate engineering controls	Ensure adequate ventilation

Control parameters

No additional information available

Additional information	The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.

Personal protective equipment

General:

Personal protective equipment:
Safety glasses. Gloves. Protective clothing. Avoid all unnecessary exposure.
Materials for protective clothing — Long sleeved protective clothing

Respiratory protection:

–

Hand protection:

Hand protection — Wear protective gloves. The permeation time is not the maximum wearing time! Generally speaking, it must be reduced. Contact with either mixtures of substances or different substances may shorten the protective function’s effective duration.

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	> 0,4		EN ISO 374

Eye protection:

Eye protection — Wear security glasses which protect from splashes

Type	Field of application	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166, EN 170

Skin and body protection:

–

Personal protective equipment symbol(s):

Hygiene measures:

Do not eat, drink or smoke when using this product.
Always wash hands after handling the product
Contaminated work clothing should not be allowed out of the workplace.
Wash contaminated clothing before reuse.

9. Physical and chemical properties

Appearance	Thixotropic paste
Physical state	Solid
Colour	Light grey
Odour	characteristic
Odour threshold [ppm]	No data available
pH	6.6
Evaporation rate	No data available
Melting point	No data available
Boiling point	No data available
Flash point	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available

Flammability (solid, gas)	Non flammable.
Vapour pressure	No data available
Relative vapour density at 20° C	No data available
Density	1.45 g/cm³
Solubility	insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	No data available
Viscosity, dynamic	45 - 59 Pa • s 23 ° C
Explosive limits (vol %)	No data available

10. Stability and reactivity

Reactivity	No data available
Chemical stability	Stable under normal conditions
Possibility of hazardous reactions	No additional information available
Conditions to avoid	Direct sunlight. Extremely high or low temperatures
Incompatible materials	Strong acids Strong bases
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced Thermal decomposition generates : fume Carbon monoxide Carbon dioxide

11. Toxicological information

Routes of exposure

No additional information available

Symptoms

Potential adverse human health effects and	No additional information available

Acute toxicity

Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
LD50 oral rat	> 2000 mg/kg (Rat; OECD 420: Acute Oral toxicity - Acute Toxic Class Method; Experimental value)
LD50 oral	11400 mg/kg
LD50 dermal rat	> 2000 mg/kg (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)	
LD50 oral rat	> 5000 mg/kg bodyweight (Rat; ECHA)
LD50 dermal rat	> 2000 mg/kg bodyweight (Rat; ECHA)
butanedioldiglycidyl ether (2425-79-8)	
LD50 oral rat	2980 mg/kg (Rat)
LD50 oral	1163 mg/kg (Rat; Exp. Key study ECHA)
LD50 dermal rabbit	1130 mg/kg (Rabbit)

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
LD50 oral rat	8025 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit	4250 mg/kg bodyweight (Rabbit; Experimental value; Equivalent or similar to OECD 402)

Skin corrosion/irritation

Skin corrosion/irritation — Causes skin irritation.
pH: 6.6

Serious eye damage/irritation

Serious eye damage/irritation — Causes serious eye damage.

Respiratory or skin sensitisation

Respiratory or skin sensitisation — May cause an allergic skin reaction.

Chronic toxicity or long-term toxicity

Germ cell mutagenicity

Germ cell mutagenicity — Not classified

Carcinogenicity

Carcinogenicity — Not classified

Reproductive toxicity

Reproductive toxicity — Not classified

STOT-single exposure

STOT-single exposure — Not classified

STOT-repeated exposure

STOT-repeated exposure — Not classified

Aspiration hazard

Aspiration hazard — Not classified

Viscosity, kinematic — No data available

12. Ecological information

Ecotoxicity

Ecology - water — Toxic to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term (acute)

Hazardous to the aquatic environment, short-term (acute) — Toxic to aquatic life.

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
LC50 - Fish [1]	1.2 mg/l (96 h; Oncorhynchus mykiss; Lethal)
LC50 - Fish [2]	2.3 mg/l (96 h; Oncorhynchus mykiss; Nominal concentration)
EC50 - Crustacea [1]	2 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration)
butanedioldiglycidyl ether (2425-79-8)	
LC50 - Fish [1]	24 mg/l (96 h; Pisces) ECHA
LC50 - Other aquatic organisms [1]	> 160 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
LC50 - Fish [1]	55 mg/l (96 h; Cyprinus carpio; Young)

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
LC50 - Fish [2]	237 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 - Crustacea [1]	473 - 710 mg/l (48 h; Daphnia magna)

Hazardous to the aquatic environment, long-term (chronic)

Hazardous to the aquatic environment, long-term (chronic)	Toxic to aquatic life with long lasting effects.

Additional ecotoxicological information

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
Threshold limit - Algae [1]	> 11 mg/l (72 h; Scenedesmus sp.)
Threshold limit - Algae [2]	4.2 mg/l (72 h; Scenedesmus sp.)
butanedioldiglycidyl ether (2425-79-8)	
NOEC (acute)	40 mg/l
Threshold limit - Algae [1]	88930 mg/l (96 h; Algae)
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
Threshold limit - Algae [1]	119 mg/l (7 days; Anabaena flosaquae)
Threshold limit - Algae [2]	250 mg/l (72 h; Selenastrum capricornutum)

Persistence and degradability

HIT-RE 500 V3, A	
Persistence and degradability	May cause long-term adverse effects in the environment
butanedioldiglycidyl ether (2425-79-8)	
Biochemical oxygen demand (BOD)	0.01982 g O_2/g substance

Bioaccumulative potential

HIT-RE 500 V3, A	
Bioaccumulative potential	Not established
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
Partition coefficient n-octanol/water (Log Pow)	⩾ 2.918 (Experimental value; EU Method A.8: Partition Coefficient; 25 ° C)
Bioaccumulative potential	Low bioaccumulation potential (BCF < 500)
butanedioldiglycidyl ether (2425-79-8)	
Partition coefficient n-octanol/water (Log Pow)	-0.15
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
Partition coefficient n-octanol/water (Log Pow)	-0.92 (Estimated value)

Mobility in soil

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
Surface tension	59 mN/m (20 ° C, 0.09 g/l)
Partition coefficient n-octanol/water (Log Pow)	⩾ 2.918 (Experimental value; EU Method A.8: Partition Coefficient; 25 ° C)
Ecology - soil	No (test)data on mobility of the substance available.

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
butanedioldiglycidyl ether (2425-79-8)	
Partition coefficient n-octanol/water (Log Pow)	-0.15
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
Partition coefficient n-octanol/water (Log Pow)	-0.92 (Estimated value)

Other adverse effects

Ozone	Not classified
Other information	Avoid release to the environment.

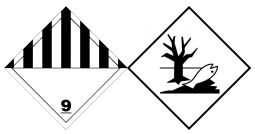
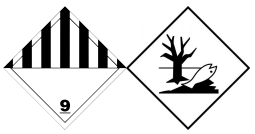
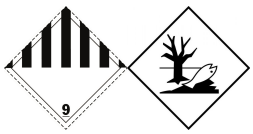
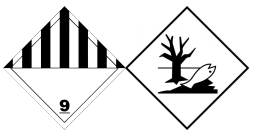
13. Disposal considerations

Waste treatment methods	-
Ecology - waste materials	Avoid release to the environment.
Sewage disposal recommendations	-
Product/Packaging disposal recommendations	After curing, the product can be disposed of with household waste. ,Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations,Packaging contaminated by the product : Dispose in a safe manner in accordance with local/national regulations

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

ADR	IMDG	IATA	RID
Special provision(s) applied : 375	Special provision(s) applied : 969	Special provision(s) applied : A197	Special provision(s) applied : 375
These substances when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of ADR provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.			
14.1. UN number or ID number			
UN 3077	UN 3077	UN 3077	UN 3077
14.2. UN proper shipping name			
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol)	Environmentally hazardous substance, solid, n.o.s. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol)

ADR	IMDG	IATA	RID
Transport document description			
UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol), 9, III, (-)	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol), 9, III	UN 3077 Environmentally hazardous substance, solid, n.o.s. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol), 9, III	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane ; Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol), 9, III
14.3. Transport hazard class(es)			
9	9	9	9
			
14.4. Packing group			
III	III	III	III
14.5. Environmental hazards			
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
Environmentally hazardous substances derogation applies (quantity of liquids ≤ 5 litres or net mass of solids ≤ 5 kg). The environmentally hazardous substance mark is therefore not required, as stated in the ADR regulation, section 5.2.1.8.1.			
not restricted according ADR Special Provision SP375, IATA-DGR Special Provision A197 and IMDG-Code 2.10.2.7			

14.6. Special precautions for user

Overland transport

Classification code (ADR)	M7
Special provisions (ADR)	274, 335, 375, 601
Limited quantities (ADR)	5kg
Packing instructions (ADR)	P002, IBC08, LP02, R001
Mixed packing provisions (ADR)	MP10
Transport category (ADR)	3
Orange plates	
Tunnel restriction code (ADR)	-

Transport by sea

Special provisions (IMDG)	274, 335, 966, 967, 969
Limited quantities (IMDG)	5 kg
Packing instructions (IMDG)	LP02, P002

EmS-No. (Fire)	F-A
EmS-No. (Spillage)	S-F
Stowage category (IMDG)	A
Stowage and handling (IMDG)	SW23
MFAG-No	171

Air transport

PCA packing instructions (IATA)	956
PCA max net quantity (IATA)	400kg
CAO packing instructions (IATA)	956
Special provisions (IATA)	A97, A158, A179, A197, A215

Rail transport

Special provisions (RID)	274, 335, 375, 601
Limited quantities (RID)	5kg
Packing instructions (RID)	P002, IBC08, LP02, R001

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

15. Regulatory information

Applicable regulations

1. Occupational Safety and Health Act
2. Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste
3. Traffic Safety Rule

16. Other information

Literature references -

Organization that prepared the SDS

Name :
Hilti Taiwan Co., Ltd.

Department :
-

Address/Telephone :

24/F, No. 16, Xinzhan Road, Banqiao Dist.
220 New Taipei City - Taiwan +886 2 6630 0345;
0800 221 036 Toll Free +886 2 2950 6132

Person who prepared the SDS — Job title : - ; Name (signature) : -

Version	3.0
Issue date	2022/12/08
Revision date	2022/12/08
Supersedes	2019/05/13

Section	Changed item	Change	Comments
2	GHS TW classification	Modified	

Section	Changed item	Change	Comments
2	Hazard pictograms (GHS TW)	Modified	
2	Hazard statements (GHS TW)	Modified	
3	Composition/information on ingredients	Modified	
14	Transport Information	Modified	

Abbreviations and acronyms	ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways,ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road,ATE - Acute Toxicity Estimate,BCF - Bioconcentration factor,CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008,DMEL - Derived Minimal Effect level,DNEL - Derived-No Effect Level,IATA - International Air Transport Association,EC50 - Median effective concentration,IMDG - International Maritime Dangerous Goods,LC50 - Median lethal concentration,LD50 - Median lethal dose,LOAEL - Lowest Observed Adverse Effect Level,NOAEC - No-Observed Adverse Effect Concentration,NOAEL - No-Observed Adverse Effect Level,NOEC - No-Observed Effect Concentration,PBT - Persistent Bioaccumulative Toxic,PNEC - Predicted No-Effect Concentration,REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006,RID - Regulations concerning the International Carriage of Dangerous Goods by Rail,SDS - Safety Data Sheet,vPvB - Very Persistent and Very Bioaccumulative
Other information	None

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

HIT-RE 500 V3, B

According to Taiwan Ministry of Labour Lao-zhi Shou-tzu No. 10702052242, “Regulations for the Labeling and Hazard Communication of Hazardous Chemicals”

Issue date: 2022/12/08 Revision date: 2022/12/08 Supersedes: 2020/05/13 Version: 1.6

1. Identification of the chemical and of the business entity

Chemical name	HIT-RE 500 V3, B
Product code	BU Anchor
Other Names	-
Recommended use	Composite mortar component for fasteners in the construction industry
Restrictions on use	For professional use only
Names, addresses, and phone numbers of manufacturer, importer or supplier	**Supplier** Hilti Taiwan Co., Ltd. 220 Taiwan New Taipei City 24/F, No. 16, Xinzhan Road, Banqiao Dist. T +886 2 6630 0345; 0800 221 036 Toll Free - F +886 2 2950 6132 twcs@hilti.com **Department issuing data specification sheet** Hilti Entwicklungsgesellschaft mbH 86916 Deutschland Kaufering Hiltistraße 6 T +49 8191 906876 anchor.hse@hilti.com
Emergency number	Schweizerisches Toxikologisches Informationszentrum - 24h Service +41 44 251 51 51 (international) +886 2 2357 9090 0800 221 036 Toll Free

2. Hazard(s) identification

GHS classification (Taiwan)

Health hazards	Acute toxicity (Oral), Category 5 Skin corrosion, Category 1B Skin sensitization, Category 1 Specific target organ toxicity - Single exposure, Category 3, Respiratory tract irritation
Environmental hazards	Hazardous to the aquatic environment - Acute Hazard, Category 2 Hazardous to the aquatic environment - Chronic Hazard, Category 3

Label content

Hazard pictograms (GHS TW)	 GHS05,GHS07
Signal word (GHS TW)	Danger
Hazard statements (GHS TW)	(H314) Causes severe skin burns and eye damage (H317) May cause an allergic skin reaction (H335) May cause respiratory irritation (H401) Toxic to aquatic life (H412) Harmful to aquatic life with long lasting effects
Precautionary statements	-

Prevention precautionary statements	(P280) Wear eye protection, protective clothing, protective gloves. (P262) Do not get in eyes, on skin, or on clothing.
Response Precautionary Statements	(P305+P351+P338) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P333+P313) If skin irritation or rash occurs: Get medical advice/attention. (P337+P313) If eye irritation persists: Get medical advice/attention. (P302+P352) IF ON SKIN: Wash with plenty of Water.
Storage precautionary statements	-
Disposal precautionary statements	-
Other hazards which do not result in classification	-

3. Composition/information on ingredients

Substance:

Not applicable

Mixture:

Chemical properties — Refer to Section 9

Name	CAS-No.	Concentration
2-methyl-1,5-pentanediamine (2-甲基戊二胺)	15520-10-2	25 - 35
Phenol, styrenated (苯乙烯化苯酚)	61788-44-1	5 - 10
m-Xylylenediamine (間二甲苯二胺)	1477-55-0	5 - <8
2,4,6-tris(dimethylaminomethyl)phenol (2,4,6- [(二甲胺基)甲基]苯酚)	90-72-2	1 - 2.5
3-Aminopropyltriethoxysilan (3-胺丙基三乙氧基矽烷)	919-30-2	1 - 2.5

4. First-aid measures

First aid measures for different exposure routes

First-aid measures general	Never give anything by mouth to an unconscious person - If you feel unwell, seek medical advice (show the label where possible)
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	Wash with plenty of water/… - Take off immediately all contaminated clothing. - Wash contaminated clothing before reuse. - If skin irritation or rash occurs: Get immediate medical advice/attention.
First-aid measures after eye contact	Get immediate medical advice/attention. - Immediately rinse with water for a prolonged period while holding the eyelids wide open - Remove contact lenses, if present and easy to do. Continue rinsing. - Consult an eye specialist
First-aid measures after ingestion	Do not induce vomiting - Rinse mouth - Immediately call a POISON CENTER/doctor.

Most Important Symptoms/Effects

Symptoms/effects	Causes severe skin burns and eye damage.
Symptoms/effects after skin contact	May cause an allergic skin reaction.
Symptoms/effects after eye contact	Causes serious eye damage.

Protection for the first aid staff

Personal Protection in First Aid and Measures	Avoid all unnecessary exposure

Notes to physician

Other medical advice or treatment	Treat symptomatically

5. Firefighting measures

Extinguishing media

Suitable extinguishing media	Foam Dry powder Carbon dioxide Water spray Sand
Unsuitable extinguishing media	Do not use a heavy water stream

Specific hazards arising from firefighting measures

Fire hazard	-
Explosion hazard	-
General measures	Spilled material may present a slipping hazard
Reactivity in case of fire	-
Hazardous decomposition products in case of fire	Thermal decomposition generates : Carbon dioxide. Carbon monoxide.

Specific firefighting methods

Firefighting instructions	Use water spray or fog for cooling exposed containers - Exercise caution when fighting any chemical fire - Prevent fire fighting water from entering the environment

Special protective equipment and precautions for fire-fighters

Protection during firefighting	Self-contained breathing apparatus - Do not enter fire area without proper protective equipment, including respiratory protection
Personal protection (Emergency response)	-

6. Accidental release measures

Personal precautions

General measures	Spilled material may present a slipping hazard

For non-emergency personnel

Emergency procedures	Evacuate unnecessary personnel

For emergency responders

Protective equipment	Use personal protective equipment as required. Equip cleanup crew with proper protection
Emergency procedures	Ventilate area

Environmental precautions

Environmental precautions	Prevent entry to sewers and public waters Notify authorities if liquid enters sewers or public waters Avoid release to the environment Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. After curing, the product can be disposed of with household waste.

Methods and material for containment and cleaning up

For containment	Collect spillage.
Methods for cleaning up	This material and its container must be disposed of in a safe way, and as per local legislation Mechanically recover the product On land, sweep or shovel into suitable containers Store away from other materials.
Other information	Dispose of materials or solid residues at an authorized site

7. Handling and storage

Handling

Precautions for safe handling	Wear personal protective equipment Avoid contact with skin and eyes Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work Avoid contact during pregnancy/while nursing
Hygiene measures	Do not eat, drink or smoke when using this product. Always wash hands after handling the product Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

Storage

Technical measures	Comply with applicable regulations
Storage conditions	Protect from sunlight. Store in a well-ventilated place.
Incompatible products	Strong bases Strong acids
Incompatible materials	Sources of ignition Direct sunlight
Storage temperature	5 - 25 ° C
Heat and ignition sources	Keep away from heat and direct sunlight

8. Exposure controls/personal protection

Appropriate engineering controls	Ensure good ventilation of the work station

Control parameters

No additional information available

Additional information	The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.

Personal protective equipment

General:

Personal protective equipment:
Safety glasses. Gloves. Protective clothing. Avoid all unnecessary exposure.

Materials for protective clothing	Long sleeved protective clothing

Respiratory protection:

-

Hand protection:

Hand protection	Wear protective gloves. The permeation time is not the maximum wearing time! Generally speaking, it must be reduced. Contact with either mixtures of substances or different substances may shorten the protective function’s effective duration.

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	> 0,4		EN ISO 374

Eye protection:

Eye protection	Wear security glasses which protect from splashes

Type	Field of application	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166, EN 170

Skin and body protection:

-

Personal protective equipment symbol(s):

Hygiene measures:

Do not eat, drink or smoke when using this product.
Always wash hands after handling the product
Contaminated work clothing should not be allowed out of the workplace.
Wash contaminated clothing before reuse.

9. Physical and chemical properties

Appearance	Thixotropic paste
Physical state	Solid
Colour	red
Odour	Amine-like
Odour threshold [ppm]	No data available
pH	11.5
Evaporation rate	No data available
Melting point	No data available
Boiling point	No data available
Flash point	No data available

Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	Non flammable.
Vapour pressure	No data available
Relative vapour density at 20° C	No data available
Density	1.31 g/cm³
Solubility	insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	No data available
Viscosity, dynamic	50 - 70 Pa • s HN-0333
Explosive limits (vol %)	No data available

10. Stability and reactivity

Reactivity	Corrosive vapours
Chemical stability	Stable under normal conditions
Possibility of hazardous reactions	No additional information available
Conditions to avoid	Direct sunlight. Extremely high or low temperatures
Incompatible materials	Strong acids Strong bases
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced Thermal decomposition generates : fume Carbon monoxide Carbon dioxide Corrosive vapours

11. Toxicological information

Routes of exposure

No additional information available

Symptoms

Potential adverse human health effects and	No additional information available

Acute toxicity

Acute toxicity (oral)	May be harmful if swallowed.
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified

HIT-RE 500 V3, B	
ATE TW (oral)	2356.632 mg/kg bodyweight
2-methyl-1,5-pentanediamine (15520-10-2)	
LD50 oral rat	1690 mg/kg (Rat)
LD50 dermal rat	1870 mg/kg
LC50 Inhalation - Rat	4.9 mg/l
Phenol, styrenated (61788-44-1)	
LD50 oral rat	> 2500 mg/kg
LD50 dermal rat	> 2000 mg/kg

2-methyl-1,5-pentanediamine (15520-10-2)	
LC50 Inhalation - Rat	158.31 mg/l/4h
m-Xylylenediamine (1477-55-0)	
LD50 oral rat	1090 mg/kg
LD50 dermal rat	> 3100 mg/kg
LD50 dermal	> 3100 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	1.34 mg/l/4h
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
LD50 oral rat	2169 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 2169 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	> 2000 mg/kg (Rat; Literature study; Other; >1 ml/kg; Rat; Experimental value)
3-Aminopropyltriethoxysilan (919-30-2)	
LD50 oral rat	1.57 - 2.83 ml/kg (EPA OTS 798.1175, Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	4.29 ml/kg (EPA OTS 798.1100, 24 h, Rabbit, Male / female, Experimental value, Dermal)
LC50 Inhalation - Rat [ppm]	> 5 ppm (OECD 403: Acute Inhalation Toxicity, 6 h, Rat, Male, Experimental value, Inhalation (vapours))

Skin corrosion/irritation

Skin corrosion/irritation	Causes severe skin burns. pH: 11.5

Serious eye damage/irritation

Serious eye damage/irritation	Assumed to cause serious eye damage

Respiratory or skin sensitisation

Respiratory or skin sensitisation	May cause an allergic skin reaction.

Chronic toxicity or long-term toxicity

Germ cell mutagenicity

Germ cell mutagenicity	Not classified

Carcinogenicity

Carcinogenicity	Not classified

Reproductive toxicity

Reproductive toxicity	Not classified

STOT-single exposure

STOT-single exposure	May cause respiratory irritation.

2-methyl-1,5-pentanediamine (15520-10-2)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure

STOT-repeated exposure	Not classified

Aspiration hazard

Aspiration hazard	Not classified
Viscosity, kinematic	No data available

12. Ecological information

Ecotoxicity

Ecology - water	Harmful to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term (acute)

Hazardous to the aquatic environment, short-term (acute)	Toxic to aquatic life.

2-methyl-1,5-pentanediamine (15520-10-2)	
LC50 - Fish [1]	130 mg/l (LC50; 48 h)
Phenol, styrenated (61788-44-1)	
LC50 - Fish [1]	5.6 mg/l
LC50 - Other aquatic organisms [1]	9.7 mg/l
EC50 - Crustacea [1]	1.44 mg/l
m-Xylylenediamine (1477-55-0)	
LC50 - Fish [1]	75 mg/l
LC50 - Other aquatic organisms [1]	20.3 ppb
EC50 - Crustacea [1]	15 mg/l
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
LC50 - Fish [1]	> 100 mg/l (96 h; Pisces; Nominal concentration)
LC50 - Fish [2]	70.9 mg/l (96 h; Pisces)
EC50 - Other aquatic organisms [1]	84 mg/l (72 h; Desmodesmus subspicatus; growth rate; ECHA)
ErC50 algae	84 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)
3-Aminopropyltriethoxysilan (919-30-2)	
LC50 - Fish [1]	> 934 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Brachydanio rerio, Semi-static system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	331 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
ErC50 algae	> 1000 mg/l (EU Method C.3, 72 h, Scenedesmus subspicatus, Static system, Fresh water, Experimental value, GLP)

Hazardous to the aquatic environment, long-term (chronic)

Hazardous to the aquatic environment, long-term (chronic)	Harmful to aquatic life with long lasting effects.

m-Xylylenediamine (1477-55-0)	
NOEC (chronic)	4.7 mg/l
NOEC chronic crustacea	4.7 mg/l
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
NOEC (chronic)	2 mg/l (28 d; activated sludge, domestic; respiration rate; ECHA)

Additional ecotoxicological information

2-methyl-1,5-pentanediamine (15520-10-2)	
LOEC (acute)	1800 mg/l
NOEC (acute)	1000 mg/l

2-methyl-1,5-pentanediamine (15520-10-2)	
Phenol, styrenated (61788-44-1)	
NOEC (acute)	3.2 mg/l
Threshold limit - Algae [1]	0.326 mg/l (72 h; Algae)
Threshold limit - Algae [2]	0.14 mg/l (72 h; Algae)
m-Xylylenediamine (1477-55-0)	
LOEC (chronic)	15 mg/l
NOEC (acute)	10.5 mg/kg
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Threshold limit - Algae [1]	10 - 100,Algae
Threshold limit - Algae [2]	84 mg/l (72 h; Scenedesmus subspicatus; Growth rate)

Persistence and degradability

HIT-RE 500 V3, B	
Persistence and degradability	May cause long-term adverse effects in the environment
Phenol, styrenated (61788-44-1)	
Biochemical oxygen demand (BOD)	0.000231 g O_2/g substance
Chemical oxygen demand (COD)	0.004827 g O_2/g substance
3-Aminopropyltriethoxysilan (919-30-2)	
Persistence and degradability	Not readily biodegradable in water

Bioaccumulative potential

HIT-RE 500 V3, B	
Bioaccumulative potential	Not established
2-methyl-1,5-pentanediamine (15520-10-2)	
Partition coefficient n-octanol/water (Log Pow)	0.27 (Estimated value)
Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4)
Phenol, styrenated (61788-44-1)	
BCF - Fish [1]	3246 l/kg (BCFBAF v3.01, Pisces, Fresh water, Weight of evidence, Fresh weight)
BCF - Fish [2]	3246 mg/l
Partition coefficient n-octanol/water (Log Pow)	6.24 – 7.77 (Experimental value; OECD 123: Partition Coefficient (1-Octanol/Water): Slow-Stirring Method)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.145 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Bioaccumulative potential	Bioaccumulative potential
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Partition coefficient n-octanol/water (Log Pow)	0.77 (Literature; 0.219; Experimental value; Equivalent or similar to OECD 107; 21.5 ° C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.32 (log Koc, Calculated value)
Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4)

2-methyl-1,5-pentanediamine (15520-10-2)	
3-Aminopropyltriethoxysilan (919-30-2)	
BCF - Fish [1]	3.4 (OECD 305: Bioconcentration: Flow-Through Fish Test, 8 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	1.7 (QSAR, 20 ° C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500)

Mobility in soil

2-methyl-1,5-pentanediamine (15520-10-2)	
Partition coefficient n-octanol/water (Log Pow)	0.27 (Estimated value)
Phenol, styrenated (61788-44-1)	
Partition coefficient n-octanol/water (Log Pow)	6.24 - 7.77 (Experimental value; OECD 123: Partition Coefficient (1-Octanol/Water): Slow-Stirring Method)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.145 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Ecology - soil	Low potential for mobility in soil.
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Partition coefficient n-octanol/water (Log Pow)	0.77 (Literature; 0.219; Experimental value; Equivalent or similar to OECD 107; 21.5 ° C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.32 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.
3-Aminopropyltriethoxysilan (919-30-2)	
Partition coefficient n-octanol/water (Log Pow)	1.7 (QSAR, 20 ° C)
Ecology - soil	No (test)data on mobility of the substance available.

Other adverse effects

Ozone	Not classified
Other information	Avoid release to the environment.

13. Disposal considerations

Waste treatment methods	-
Ecology - waste materials	Avoid release to the environment.
Sewage disposal recommendations	-
Product/Packaging disposal recommendations	After curing, the product can be disposed of with household waste. ,Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations,Packaging contaminated by the product : Dispose in a safe manner in accordance with local/national regulations

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

ADR	IMDG	IATA	RID
14.1. UN number			
UN 3259	UN 3259	UN 3259	UN 3259
14.2. UN proper shipping name			
AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)	AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)	Amines, solid, corrosive, n.o.s. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)	AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)
Transport document description			
UN 3259 AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II, (E)	UN 3259 AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II	UN 3259 Amines, solid, corrosive, n.o.s. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II	UN 3259 AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II
14.3. Transport hazard class(es)			
8	8	8	8
			
14.4. Packing group			
II	II	II	II
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

Overland transport

Classification code (ADR)	C8
Special provisions (ADR)	274
Limited quantities (ADR)	1kg
Packing instructions (ADR)	P002, IBC08
Mixed packing provisions (ADR)	MP10
Transport category (ADR)	2
Orange plates	
Tunnel restriction code (ADR)	E

Transport by sea

Special provisions (IMDG)	274
Limited quantities (IMDG)	1 kg
Packing instructions (IMDG)	P002
EmS-No. (Fire)	F-A

EmS-No. (Spillage)	S-B
Stowage category (IMDG)	A
MFAG-No	154

Air transport

PCA packing instructions (IATA)	859
PCA max net quantity (IATA)	15kg
CAO packing instructions (IATA)	863
Special provisions (IATA)	A3

Rail transport

Special provisions (RID)	274
Limited quantities (RID)	1kg
Packing instructions (RID)	P002, IBC08

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

15. Regulatory information

Applicable regulations

1. Occupational Safety and Health Act
2. Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste
3. Traffic Safety Rule

16. Other information

Literature references -

Organization that prepared the SDS

Name :
Hilti Taiwan Co., Ltd.

Department :
-

Address/Telephone :

24/F, No. 16, Xinzhan Road, Banqiao Dist.
220 New Taipei City - Taiwan +886 2 6630 0345;
0800 221 036 Toll Free +886 2 2950 6132

Person who prepared the SDS — Job title : - — Name (signature) : -

Version	1.6
Issue date	2022/12/08
Revision date	2022/12/08
Supersedes	2020/05/13

Section	Changed item	Change	Comments
2	GHS TW classification	Modified	

Abbreviations and acronyms	ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways,ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road,ATE - Acute Toxicity Estimate,BCF - Bioconcentration factor,CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008,DMEL - Derived Minimal Effect level,DNEL - Derived-No Effect Level,IATA - International Air Transport Association,EC50 - Median effective concentration,IMDG - International Maritime Dangerous Goods,LC50 - Median lethal concentration,LD50 - Median lethal dose,LOAEL - Lowest Observed Adverse Effect Level,NOAEC - No-Observed Adverse Effect Concentration,NOAEL - No-Observed Adverse Effect Level,NOEC - No-Observed Effect Concentration,PBT - Persistent Bioaccumulative Toxic,PNEC - Predicted No-Effect Concentration,REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006,RID - Regulations concerning the International Carriage of Dangerous Goods by Rail,SDS - Safety Data Sheet,vPvB - Very Persistent and Very Bioaccumulative
Other information	None

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

HIT-RE 500 V3

Safety information for 2-Component-products

Issue date: 30/03/2023 Revision date: 30/03/2023 Supersedes: 13/05/2020 Version: 2.5

SECTION 1: Kit identification

1.1 Product identifier

Trade name	HIT-RE 500 V3
	
Product code	BU Anchor

1.2 Details of the supplier of the Safety information for 2-Component-products

Hilti Taiwan Co., Ltd.
24/F, No. 16, Xinzhan Road, Banqiao Dist.
220 New Taipei City - Taiwan
T +886 2 6630 0345;
0800 221 036 Toll Free - F +886 2 2950 6132
twcs@hilti.com

SECTION 2: General information

Storage	Storage temperature : 5 - 25 ° C

A SDS for each of these components is included. Please do not separate any component SDS from this cover page

This Kit should be handled in accordance with good laboratory practices and appropriate personal protective equipment should be used

SECTION 3: Kit contents

Classification of the Product

Classification according to the United Nations GHS (Rev. 4, 2011)

Health hazards	Acute toxicity (Oral), Category 5 Skin corrosion, Category 1B Serious eye damage/eye irritation, Category 1 Skin sensitization, Category 1 Germ cells mutagenicity, Category 2 Toxic to reproduction, Category 1B Specific target organ toxicity - Single exposure, Category 3, Respiratory tract irritation
Environmental hazards	Hazardous to the aquatic environment - Acute Hazard, Category 2 Hazardous to the aquatic environment - Chronic Hazard, Category 2

Other hazards not mentioned above are Not applicable or No data is available.

Label elements

HIT-RE 500 V3

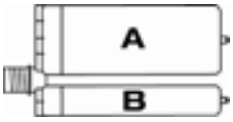
Safety information for 2-Component-products

Labelling according to the United Nations GHS (Rev. 4, 2011)

Hazard pictograms (GHS TW)	 GHS05 GHS07 GHS08 GHS09
Signal word (GHS TW)	Danger
Hazardous ingredients	Epoxy resin, Amines
Hazard statements (GHS TW)	H314 - Causes severe skin burns and eye damage. H317 - May cause an allergic skin reaction. H335 - May cause respiratory irritation. H341 - Suspected of causing genetic defects. H360 - May damage fertility or the unborn child. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (GHS TW)	P280 - Wear eye protection, protective clothing, protective gloves. P262 - Do not get in eyes, on skin, or on clothing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P302+P352 - IF ON SKIN: Wash with plenty of water. P337+P313 - If eye irritation persists: Get medical advice/attention. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

Additional information

2-component-foilpack, contains:
Component A: Epoxy resin, Reactive diluent, inorganic filler
Component B: Amine hardener, inorganic filler



Name	General description	Quantity	Unit	Classification according to the United Nations GHS (Rev. 4, 2011)
HIT-RE 500 V3, B		1	pcs (pieces)	Acute Tox. 5 (Oral), H303 Skin Corr. 1B, H314 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Acute 2, H401 Aquatic Chronic 3, H412
HIT-RE 500 V3, A		1	pcs (pieces)	Skin Corr. 1C, H314 Skin Sens. 1, H317 Muta. 2, H341 Repr. 1B, H360 Aquatic Acute 2, H401 Aquatic Chronic 2, H411

SECTION 4: General advice

General advice	For professional users only

SECTION 5: Safe handling advice

General measures	Spilled material may present a slipping hazard
Environmental precautions	Prevent entry to sewers and public waters Notify authorities if liquid enters sewers or public waters Avoid release to the environment Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. After curing, the product can be disposed of with household waste.
Storage conditions	Protect from sunlight. Store in a well-ventilated place.
Technical measures	Comply with applicable regulations
Precautions for safe handling	Wear personal protective equipment Avoid contact with skin and eyes Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work Avoid contact during pregnancy/while nursing
Methods for cleaning up	This material and its container must be disposed of in a safe way, and as per local legislation Mechanically recover the product On land, sweep or shovel into suitable containers Store away from other materials.
For containment	Collect spillage.
Incompatible materials	Sources of ignition Direct sunlight
Incompatible products	Strong bases Strong acids

SECTION 6: First aid measures

First-aid measures after eye contact	Get immediate medical advice/attention. Immediately rinse with water for a prolonged period while holding the eyelids wide open Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist
First-aid measures after ingestion	Do not induce vomiting Rinse mouth Immediately call a POISON CENTER/doctor.
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	Wash with plenty of water/… Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get immediate medical advice/attention.
First-aid measures general	Never give anything by mouth to an unconscious person If you feel unwell, seek medical advice (show the label where possible)
Symptoms/effects	Causes severe skin burns and eye damage.
Symptoms/effects after eye contact	Causes serious eye damage.
Symptoms/effects after skin contact	May cause an allergic skin reaction.
Other medical advice or treatment	Treat symptomatically

SECTION 7: Fire fighting measures

Firefighting instructions	Use water spray or fog for cooling exposed containers Exercise caution when fighting any chemical fire Prevent fire fighting water from entering the environment
Protection during firefighting	Self-contained breathing apparatus Do not enter fire area without proper protective equipment, including respiratory protection
Hazardous decomposition products in case of fire	Thermal decomposition generates : Carbon dioxide Carbon monoxide

SECTION 8: Other information

No data available

HIT-RE 500 V3, A

According to Taiwan Ministry of Labour Lao-zhi Shou-tzu No. 10702052242, “Regulations for the Labeling and Hazard Communication of Hazardous Chemicals”

Issue date: 2023/03/30 Revision date: 2023/03/30 Supersedes: 2019/05/13 Version: 2.5

1. Identification of the chemical and of the business entity

Chemical name	HIT-RE 500 V3, A
Product code	BU Anchor
Other Names	-
Recommended use	Composite mortar component for fasteners in the construction industry
Restrictions on use	For professional use only
Names, addresses, and phone numbers of manufacturer, importer or supplier	**Supplier** Hilti Taiwan Co., Ltd. 220 Taiwan New Taipei City 24/F, No. 16, Xinzhan Road, Banqiao Dist. T +886 2 6630 0345; 0800 221 036 Toll Free - F +886 2 2950 6132 twcs@hilti.com **Department issuing data specification sheet** Hilti Entwicklungsgesellschaft mbH 86916 Deutschland Kaufering Hiltistraße 6 T +49 8191 906876 anchor.hse@hilti.com
Emergency number	Schweizerisches Toxikologisches Informationszentrum - 24h Service +41 44 251 51 51 (international) +886 2 2357 9090 0800 221 036 Toll Free

2. Hazard(s) identification

GHS classification (Taiwan)

Health hazards	Skin corrosion, Category 1C Skin sensitization, Category 1 Germ cells mutagenicity, Category 2 Toxic to reproduction, Category 1B
Environmental hazards	Hazardous to the aquatic environment - Acute Hazard, Category 2 Hazardous to the aquatic environment - Chronic Hazard, Category 2

Label content

Hazard pictograms (GHS TW)	 GHS05, GHS07, GHS08, GHS09
Signal word (GHS TW)	Danger
Hazard statements (GHS TW)	(H314) Causes severe skin burns and eye damage (H317) May cause an allergic skin reaction (H341) Suspected of causing genetic defects (H360) May damage fertility. (H411) Toxic to aquatic life with long lasting effects
Precautionary statements	-

Prevention precautionary statements	(P280) Wear eye protection, protective clothing, protective gloves. (P262) Do not get in eyes, on skin, or on clothing.
Response Precautionary Statements	(P305+P351+P338) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P333+P313) If skin irritation or rash occurs: Get medical advice/attention. (P337+P313) If eye irritation persists: Get medical advice/attention. (P302+P352) IF ON SKIN: Wash with plenty of Water.
Storage precautionary statements	-
Disposal precautionary statements	-
Other hazards which do not result in classification	-

3. Composition/information on ingredients

Substance:

Not applicable

Mixture:

Chemical properties — Refer to Section 9

Name	CAS-No.	Concentration
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (2,2'-[(1-甲基亚乙基)双(4,1-亚苯氧基亚甲基)]双环氧乙烷)	1675-54-3	25 - 40
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (甲醛與環氧氯丙烷及苯酚的寡聚反應產物)	9003-36-5	10 - 25
butanedioldiglycidyl ether (1,4-丁二醇二縮水甘油醚)	2425-79-8	5 - 10
1,3 Propanediol, 2 ethyl-2-(hydroxymethyl)-, polymer with 2-(chloromethyl)oxirane (三羥甲基丙烷三縮水甘油醚)	30499-70-8	5 - 10
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	2.5 - 5

4. First-aid measures

First aid measures for different exposure routes

First-aid measures general	Never give anything by mouth to an unconscious person - If you feel unwell, seek medical advice (show the label where possible)
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing. - Allow affected person to breathe fresh air - Allow the victim to rest
First-aid measures after skin contact	Gently wash with plenty of soap and water. - Wash contaminated clothing before reuse. - If skin irritation occurs: Get immediate medical advice/attention.
First-aid measures after eye contact	Rinse immediately with plenty of water - Remove contact lenses, if present and easy to do. Continue rinsing. - Obtain medical attention if pain, blinking or redness persists
First-aid measures after ingestion	Rinse mouth - Get medical advice/attention. - Do not induce vomiting - Obtain emergency medical attention

Most Important Symptoms/Effects

Symptoms/effects after skin contact	Causes skin irritation,May cause an allergic skin reaction.

Symptoms/effects after eye contact	Causes serious eye irritation.

Protection for the first aid staff

Personal Protection in First Aid and Measures	Avoid all unnecessary exposure

Notes to physician

Other medical advice or treatment	Treat symptomatically

5. Firefighting measures

Extinguishing media

Suitable extinguishing media	Water spray Carbon dioxide Dry powder Foam Sand
Unsuitable extinguishing media	Do not use a heavy water stream

Specific hazards arising from firefighting measures

Fire hazard	-
Explosion hazard	-
General measures	Spilled material may present a slipping hazard
Reactivity in case of fire	-
Hazardous decomposition products in case of fire	Thermal decomposition generates : Carbon dioxide. Carbon monoxide.

Specific firefighting methods

Firefighting instructions	Use water spray or fog for cooling exposed containers - Exercise caution when fighting any chemical fire - Prevent fire fighting water from entering the environment

Special protective equipment and precautions for fire-fighters

Protection during firefighting	Self-contained breathing apparatus - Do not enter fire area without proper protective equipment, including respiratory protection
Personal protection (Emergency response)	-

6. Accidental release measures

Personal precautions

General measures	Spilled material may present a slipping hazard

For non-emergency personnel

Emergency procedures	Evacuate unnecessary personnel

For emergency responders

Protective equipment	Use personal protective equipment as required. Equip cleanup crew with proper protection
Emergency procedures	Ventilate area

Environmental precautions

Environmental precautions	Prevent entry to sewers and public waters Notify authorities if liquid enters sewers or public waters Avoid release to the environment Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. After curing, the product can be disposed of with household waste.

Methods and material for containment and cleaning up

For containment	Collect spillage.
Methods for cleaning up	This material and its container must be disposed of in a safe way, and as per local legislation Mechanically recover the product On land, sweep or shovel into suitable containers Store away from other materials.
Other information	Dispose of materials or solid residues at an authorized site

7. Handling and storage

Handling

Precautions for safe handling	Wear personal protective equipment Avoid contact with skin and eyes Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work
Hygiene measures	Do not eat, drink or smoke when using this product. Always wash hands after handling the product Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

Storage

Storage conditions	Protect from sunlight.
Incompatible products	Strong bases Strong acids
Incompatible materials	Sources of ignition Direct sunlight
Storage temperature	5 - 25 ° C
Heat and ignition sources	Keep away from heat and direct sunlight

8. Exposure controls/personal protection

Appropriate engineering controls No specific measures identified

Control parameters

No additional information available

Additional information	The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.

Personal protective equipment

General:

Personal protective equipment:
Safety glasses. Gloves. Protective clothing. Avoid all unnecessary exposure.
Materials for protective clothing — Long sleeved protective clothing

Respiratory protection:

–

Hand protection:

Hand protection — Wear protective gloves. The permeation time is not the maximum wearing time! Generally speaking, it must be reduced. Contact with either mixtures of substances or different substances may shorten the protective function’s effective duration.

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	> 0,4		EN ISO 374

Eye protection:

Eye protection — Wear security glasses which protect from splashes

Type	Field of application	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166, EN 170

Skin and body protection:

–

Personal protective equipment symbol(s):

Hygiene measures:

Do not eat, drink or smoke when using this product.
Always wash hands after handling the product
Contaminated work clothing should not be allowed out of the workplace.
Wash contaminated clothing before reuse.

9. Physical and chemical properties

Appearance	Thixotropic paste
Physical state	Solid
Colour	Light grey
Odour	characteristic
Odour threshold [ppm]	No data available
pH	6.6
Evaporation rate	No data available
Melting point	No data available
Boiling point	No data available
Flash point	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available

Flammability (solid, gas)	Non flammable.
Vapour pressure	No data available
Relative vapour density at 20° C	No data available
Density	1.45 g/cm³
Solubility	insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	No data available
Viscosity, dynamic	45 - 59 Pa • s 23 ° C
Explosive limits (vol %)	No data available

10. Stability and reactivity

Reactivity	No data available
Chemical stability	Stable under normal conditions
Possibility of hazardous reactions	No additional information available
Conditions to avoid	Direct sunlight. Extremely high or low temperatures
Incompatible materials	Strong acids Strong bases
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced Thermal decomposition generates : fume Carbon monoxide Carbon dioxide

11. Toxicological information

Routes of exposure

No additional information available

Symptoms

Potential adverse human health effects and — No additional information available

Acute toxicity

Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
LD50 oral rat	> 2000 mg/kg (Rat; OECD 420: Acute Oral toxicity - Acute Toxic Class Method; Experimental value)
LD50 oral	11400 mg/kg
LD50 dermal rat	> 2000 mg/kg (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)	
LD50 oral rat	> 5000 mg/kg bodyweight (Rat; ECHA)
LD50 dermal rat	> 2000 mg/kg bodyweight (Rat; ECHA)
butanedioldiglycidyl ether (2425-79-8)	
LD50 oral rat	2980 mg/kg (Rat)
LD50 oral	1163 mg/kg (Rat; Exp. Key study ECHA)

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
LD50 dermal rat	> 2150 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rat, Male / female, Experimental value, Dermal, 7 day(s))
LD50 dermal rabbit	1130 mg/kg (Rabbit)
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
LD50 oral rat	8025 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit	4250 mg/kg bodyweight (Rabbit; Experimental value; Equivalent or similar to OECD 402)

Skin corrosion/irritation

Skin corrosion/irritation	Causes severe skin burns. pH: 6.6

Serious eye damage/irritation

Serious eye damage/irritation	Assumed to cause serious eye damage

Respiratory or skin sensitisation

Respiratory or skin sensitisation	May cause an allergic skin reaction.

Chronic toxicity or long-term toxicity

Germ cell mutagenicity

Germ cell mutagenicity	Suspected of causing genetic defects.

Carcinogenicity

Carcinogenicity	Not classified

Reproductive toxicity

Reproductive toxicity	May damage fertility.

STOT-single exposure

STOT-single exposure	Not classified

STOT-repeated exposure

STOT-repeated exposure	Not classified

Aspiration hazard

Aspiration hazard	Not classified
Viscosity, kinematic	No data available

12. Ecological information

Ecotoxicity

Ecology - water	Toxic to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term (acute)

Hazardous to the aquatic environment, short-term (acute)	Toxic to aquatic life.

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
LC50 - Fish [1]	1.2 mg/l (96 h; Oncorhynchus mykiss; Lethal)
LC50 - Fish [2]	2.3 mg/l (96 h; Oncorhynchus mykiss; Nominal concentration)
EC50 - Crustacea [1]	2 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration)
butanedioldiglycidyl ether (2425-79-8)	
LC50 - Fish [1]	24 mg/l (96 h; Pisces) ECHA
LC50 - Other aquatic organisms [1]	> 160 mg/l

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
LC50 - Fish [1]	55 mg/l (96 h; Cyprinus carpio; Young)
LC50 - Fish [2]	237 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 - Crustacea [1]	473 - 710 mg/l (48 h; Daphnia magna)

Hazardous to the aquatic environment, long-term (chronic)

Hazardous to the aquatic environment, long-term (chronic)	Toxic to aquatic life with long lasting effects.

Additional ecotoxicological information

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
Threshold limit - Algae [1]	> 11 mg/l (72 h; Scenedesmus sp.)
Threshold limit - Algae [2]	4.2 mg/l (72 h; Scenedesmus sp.)
butanedioldiglycidyl ether (2425-79-8)	
NOEC (acute)	40 mg/l
Threshold limit - Algae [1]	88930 mg/l (96 h; Algae)
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
Threshold limit - Algae [1]	119 mg/l (7 days; Anabaena flosaquae)
Threshold limit - Algae [2]	250 mg/l (72 h; Selenastrum capricornutum)

Persistence and degradability

HIT-RE 500 V3, A	
Persistence and degradability	May cause long-term adverse effects in the environment
butanedioldiglycidyl ether (2425-79-8)	
Biochemical oxygen demand (BOD)	0.01982 g O_2/g substance

Bioaccumulative potential

HIT-RE 500 V3, A	
Bioaccumulative potential	Not established
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
Partition coefficient n-octanol/water (Log Pow)	⩾ 2.918 (Experimental value; EU Method A.8: Partition Coefficient; 25 ° C)
Bioaccumulative potential	Low bioaccumulation potential (BCF < 500)
butanedioldiglycidyl ether (2425-79-8)	
Partition coefficient n-octanol/water (Log Pow)	-0.27 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 ° C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.1 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
Partition coefficient n-octanol/water (Log Pow)	-0.92 (Estimated value)

Mobility in soil

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
Surface tension	59 mN/m (20 ° C, 0.09 g/l)
Partition coefficient n-octanol/water (Log Pow)	⩾ 2.918 (Experimental value; EU Method A.8: Partition Coefficient; 25 ° C)
Ecology - soil	No (test)data on mobility of the substance available.
butanedioldiglycidyl ether (2425-79-8)	
Surface tension	44.4 mN/m (20 ° C, 90 %, EU Method A.5: Surface tension)
Partition coefficient n-octanol/water (Log Pow)	-0.27 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 ° C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.1 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP)
Ecology - soil	Highly mobile in soil.
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
Partition coefficient n-octanol/water (Log Pow)	-0.92 (Estimated value)

Other adverse effects

Ozone	Not classified
Other information	Avoid release to the environment.

13. Disposal considerations

Waste treatment methods	-
Ecology - waste materials	Avoid release to the environment.
Sewage disposal recommendations	-
Product/Packaging disposal recommendations	After curing, the product can be disposed of with household waste. ,Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations,Packaging contaminated by the product : Dispose in a safe manner in accordance with local/national regulations

SECTION 14: Transport information

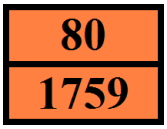
In accordance with ADR / IMDG / IATA / RID

ADR	IMDG	IATA	RID
14.1. UN number or ID number			
UN 1759	UN 1759	UN 1759	UN 1759
14.2. UN proper shipping name			
CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether)	CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether)	Corrosive solid, n.o.s. (trimethylolpropane triglycidylether)	CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether)
Transport document description			
UN 1759 CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether), 8, III, (E), ENVIRONMENTALLY HAZARDOUS	UN 1759 CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether), 8, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1759 Corrosive solid, n.o.s. (trimethylolpropane triglycidylether), 8, III, ENVIRONMENTALLY HAZARDOUS	UN 1759 CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether), 8, III, ENVIRONMENTALLY HAZARDOUS

ADR	IMDG	IATA	RID
14.3. Transport hazard class(es)			
8	8	8	8
			
14.4. Packing group			
III	III	III	III
14.5. Environmental hazards			
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available			

14.6. Special precautions for user

Overland transport

Classification code (ADR)	C10
Special provisions (ADR)	274
Limited quantities (ADR)	5kg
Packing instructions (ADR)	P002, IBC08, LP02, R001
Mixed packing provisions (ADR)	MP10
Transport category (ADR)	3
Orange plates	
Tunnel restriction code (ADR)	E

Transport by sea

Special provisions (IMDG)	223, 274
Packing instructions (IMDG)	P002, LP02
EmS-No. (Fire)	F-A
EmS-No. (Spillage)	S-B
Stowage category (IMDG)	A

Air transport

PCA packing instructions (IATA)	860
PCA max net quantity (IATA)	25kg
CAO packing instructions (IATA)	864
Special provisions (IATA)	A3, A803

Rail transport

Special provisions (RID)	274
Packing instructions (RID)	P002, IBC08, LP02, R001

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

15. Regulatory information

Applicable regulations

1. Occupational Safety and Health Act
2. Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste
3. Traffic Safety Rule

16. Other information

Literature references	-
Version	2.5
Issue date	2023/03/30
Revision date	2023/03/30
Supersedes	2019/05/13
Abbreviations and acronyms	ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways,ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road,ATE - Acute Toxicity Estimate,BCF - Bioconcentration factor,CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008,DMEL - Derived Minimal Effect level,DNEL - Derived-No Effect Level,IATA - International Air Transport Association,EC50 - Median effective concentration,IMDG - International Maritime Dangerous Goods,LC50 - Median lethal concentration,LD50 - Median lethal dose,LOAEL - Lowest Observed Adverse Effect Level,NOAEC - No-Observed Adverse Effect Concentration,NOAEL - No-Observed Adverse Effect Level,NOEC - No-Observed Effect Concentration,PBT - Persistent Bioaccumulative Toxic,PNEC - Predicted No-Effect Concentration,REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006,RID - Regulations concerning the International Carriage of Dangerous Goods by Rail,SDS - Safety Data Sheet,vPvB - Very Persistent and Very Bioaccumulative
Other information	None

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

HIT-RE 500 V3, B

According to Taiwan Ministry of Labour Lao-zhi Shou-tzu No. 10702052242, “Regulations for the Labeling and Hazard Communication of Hazardous Chemicals”

Issue date: 2022/12/08 Revision date: 2022/12/08 Supersedes: 2020/05/13 Version: 1.6

1. Identification of the chemical and of the business entity

Chemical name	HIT-RE 500 V3, B
Product code	BU Anchor
Other Names	-
Recommended use	Composite mortar component for fasteners in the construction industry
Restrictions on use	For professional use only
Names, addresses, and phone numbers of manufacturer, importer or supplier	**Supplier** Hilti Taiwan Co., Ltd. 220 Taiwan New Taipei City 24/F, No. 16, Xinzhan Road, Banqiao Dist. T +886 2 6630 0345; 0800 221 036 Toll Free - F +886 2 2950 6132 twcs@hilti.com **Department issuing data specification sheet** Hilti Entwicklungsgesellschaft mbH 86916 Deutschland Kaufering Hiltistraße 6 T +49 8191 906876 anchor.hse@hilti.com
Emergency number	Schweizerisches Toxikologisches Informationszentrum - 24h Service +41 44 251 51 51 (international) +886 2 2357 9090 0800 221 036 Toll Free

2. Hazard(s) identification

GHS classification (Taiwan)

Health hazards	Acute toxicity (Oral), Category 5 Skin corrosion, Category 1B Skin sensitization, Category 1 Specific target organ toxicity - Single exposure, Category 3, Respiratory tract irritation
Environmental hazards	Hazardous to the aquatic environment - Acute Hazard, Category 2 Hazardous to the aquatic environment - Chronic Hazard, Category 3

Label content

Hazard pictograms (GHS TW)

GHS05,GHS07

Signal word (GHS TW)	Danger
Hazard statements (GHS TW)	(H314) Causes severe skin burns and eye damage (H317) May cause an allergic skin reaction (H335) May cause respiratory irritation (H401) Toxic to aquatic life (H412) Harmful to aquatic life with long lasting effects
Precautionary statements	-

Prevention precautionary statements	(P280) Wear eye protection, protective clothing, protective gloves. (P262) Do not get in eyes, on skin, or on clothing.
Response Precautionary Statements	(P305+P351+P338) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P333+P313) If skin irritation or rash occurs: Get medical advice/attention. (P337+P313) If eye irritation persists: Get medical advice/attention. (P302+P352) IF ON SKIN: Wash with plenty of Water.
Storage precautionary statements	-
Disposal precautionary statements	-
Other hazards which do not result in classification	-

3. Composition/information on ingredients

Substance:

Not applicable

Mixture:

Chemical properties — Refer to Section 9

Name	CAS-No.	Concentration
2-methyl-1,5-pentanediamine (2-甲基戊二胺)	15520-10-2	25 - 35
Phenol, styrenated (苯乙烯化苯酚)	61788-44-1	5 - 10
m-Xylylenediamine (間二甲苯二胺)	1477-55-0	5 - <8
2,4,6-tris(dimethylaminomethyl)phenol (2,4,6-參[(二甲胺基)甲基]苯酚)	90-72-2	1 - 2.5
3-Aminopropyltriethoxysilan (3-胺丙基三乙氧基矽烷)	919-30-2	1 - 2.5

4. First-aid measures

First aid measures for different exposure routes

First-aid measures general	Never give anything by mouth to an unconscious person - If you feel unwell, seek medical advice (show the label where possible)
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	Wash with plenty of water/… - Take off immediately all contaminated clothing. - Wash contaminated clothing before reuse. - If skin irritation or rash occurs: Get immediate medical advice/attention.
First-aid measures after eye contact	Get immediate medical advice/attention. - Immediately rinse with water for a prolonged period while holding the eyelids wide open - Remove contact lenses, if present and easy to do. Continue rinsing. - Consult an eye specialist
First-aid measures after ingestion	Do not induce vomiting - Rinse mouth - Immediately call a POISON CENTER/doctor.

Most Important Symptoms/Effects

Symptoms/effects	Causes severe skin burns and eye damage.
Symptoms/effects after skin contact	May cause an allergic skin reaction.
Symptoms/effects after eye contact	Causes serious eye damage.

Protection for the first aid staff

Personal Protection in First Aid and Measures	Avoid all unnecessary exposure

Notes to physician

Other medical advice or treatment	Treat symptomatically

5. Firefighting measures

Extinguishing media

Suitable extinguishing media	Foam Dry powder Carbon dioxide Water spray Sand
Unsuitable extinguishing media	Do not use a heavy water stream

Specific hazards arising from firefighting measures

Fire hazard	-
Explosion hazard	-
General measures	Spilled material may present a slipping hazard
Reactivity in case of fire	-
Hazardous decomposition products in case of fire	Thermal decomposition generates : Carbon dioxide. Carbon monoxide.

Specific firefighting methods

Firefighting instructions	Use water spray or fog for cooling exposed containers - Exercise caution when fighting any chemical fire - Prevent fire fighting water from entering the environment

Special protective equipment and precautions for fire-fighters

Protection during firefighting	Self-contained breathing apparatus - Do not enter fire area without proper protective equipment, including respiratory protection
Personal protection (Emergency response)	-

6. Accidental release measures

Personal precautions

General measures	Spilled material may present a slipping hazard

For non-emergency personnel

Emergency procedures	Evacuate unnecessary personnel

For emergency responders

Protective equipment	Use personal protective equipment as required. Equip cleanup crew with proper protection
Emergency procedures	Ventilate area

Environmental precautions

Environmental precautions	Prevent entry to sewers and public waters Notify authorities if liquid enters sewers or public waters Avoid release to the environment Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. After curing, the product can be disposed of with household waste.

Methods and material for containment and cleaning up

For containment	Collect spillage.
Methods for cleaning up	This material and its container must be disposed of in a safe way, and as per local legislation Mechanically recover the product On land, sweep or shovel into suitable containers Store away from other materials.
Other information	Dispose of materials or solid residues at an authorized site

7. Handling and storage

Handling

Precautions for safe handling	Wear personal protective equipment Avoid contact with skin and eyes Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work Avoid contact during pregnancy/while nursing
Hygiene measures	Do not eat, drink or smoke when using this product. Always wash hands after handling the product Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

Storage

Technical measures	Comply with applicable regulations
Storage conditions	Protect from sunlight. Store in a well-ventilated place.
Incompatible products	Strong bases Strong acids
Incompatible materials	Sources of ignition Direct sunlight
Storage temperature	5 - 25 ° C
Heat and ignition sources	Keep away from heat and direct sunlight

8. Exposure controls/personal protection

Appropriate engineering controls	Ensure good ventilation of the work station

Control parameters

No additional information available

Additional information	The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.

Personal protective equipment

General:

Personal protective equipment:

Safety glasses. Gloves. Protective clothing. Avoid all unnecessary exposure.

Materials for protective clothing: Long sleeved protective clothing

Respiratory protection:

–

Hand protection:

Hand protection: Wear protective gloves. The permeation time is not the maximum wearing time! Generally speaking, it must be reduced. Contact with either mixtures of substances or different substances may shorten the protective function’s effective duration.

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	> 0,4		EN ISO 374

Eye protection:

Eye protection: Wear security glasses which protect from splashes

Type	Field of application	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166, EN 170

Skin and body protection:

–

Personal protective equipment symbol(s):

Hygiene measures:

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

Always wash hands after handling the product

Contaminated work clothing should not be allowed out of the workplace.

Wash contaminated clothing before reuse.

9. Physical and chemical properties

Appearance	Thixotropic paste
Physical state	Solid
Colour	red
Odour	Amine-like
Odour threshold [ppm]	No data available
pH	11.5
Evaporation rate	No data available
Melting point	No data available
Boiling point	No data available
Flash point	No data available

Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	Non flammable.
Vapour pressure	No data available
Relative vapour density at 20° C	No data available
Density	1.31 g/cm³
Solubility	insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	No data available
Viscosity, dynamic	50 - 70 Pa • s HN-0333
Explosive limits (vol %)	No data available

10. Stability and reactivity

Reactivity	Corrosive vapours
Chemical stability	Stable under normal conditions
Possibility of hazardous reactions	No additional information available
Conditions to avoid	Direct sunlight. Extremely high or low temperatures
Incompatible materials	Strong acids Strong bases
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced Thermal decomposition generates : fume Carbon monoxide Carbon dioxide Corrosive vapours

11. Toxicological information

Routes of exposure

No additional information available

Symptoms

Potential adverse human health effects and	No additional information available

Acute toxicity

Acute toxicity (oral)	May be harmful if swallowed.
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified

HIT-RE 500 V3, B	
ATE TW (oral)	2356.632 mg/kg bodyweight
2-methyl-1,5-pentanediamine (15520-10-2)	
LD50 oral rat	1690 mg/kg (Rat)
LD50 dermal rat	1870 mg/kg
LC50 Inhalation - Rat	4.9 mg/l
Phenol, styrenated (61788-44-1)	
LD50 oral rat	> 2500 mg/kg
LD50 dermal rat	> 2000 mg/kg

2-methyl-1,5-pentanediamine (15520-10-2)	
LC50 Inhalation - Rat	158.31 mg/l/4h
m-Xylylenediamine (1477-55-0)	
LD50 oral rat	1090 mg/kg
LD50 dermal rat	> 3100 mg/kg
LD50 dermal	> 3100 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	1.34 mg/l/4h
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
LD50 oral rat	2169 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 2169 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	> 2000 mg/kg (Rat; Literature study; Other; >1 ml/kg; Rat; Experimental value)
3-Aminopropyltriethoxysilan (919-30-2)	
LD50 oral rat	1.57 – 2.83 ml/kg (EPA OTS 798.1175, Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	4.29 ml/kg (EPA OTS 798.1100, 24 h, Rabbit, Male / female, Experimental value, Dermal)
LC50 Inhalation - Rat [ppm]	> 5 ppm (OECD 403: Acute Inhalation Toxicity, 6 h, Rat, Male, Experimental value, Inhalation (vapours))

Skin corrosion/irritation

Skin corrosion/irritation	Causes severe skin burns. pH: 11.5

Serious eye damage/irritation

Serious eye damage/irritation	Assumed to cause serious eye damage

Respiratory or skin sensitisation

Respiratory or skin sensitisation	May cause an allergic skin reaction.

Chronic toxicity or long-term toxicity

Germ cell mutagenicity

Germ cell mutagenicity	Not classified

Carcinogenicity

Carcinogenicity	Not classified

Reproductive toxicity

Reproductive toxicity	Not classified

STOT-single exposure

STOT-single exposure	May cause respiratory irritation.

2-methyl-1,5-pentanediamine (15520-10-2)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure

STOT-repeated exposure	Not classified

Aspiration hazard

Aspiration hazard	Not classified
Viscosity, kinematic	No data available

12. Ecological information

Ecotoxicity

Ecology - water	Harmful to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term (acute)

Hazardous to the aquatic environment, short-term (acute)	Toxic to aquatic life.

2-methyl-1,5-pentanediamine (15520-10-2)	
LC50 - Fish [1]	130 mg/l (LC50; 48 h)
Phenol, styrenated (61788-44-1)	
LC50 - Fish [1]	5.6 mg/l
LC50 - Other aquatic organisms [1]	9.7 mg/l
EC50 - Crustacea [1]	1.44 mg/l
m-Xylylenediamine (1477-55-0)	
LC50 - Fish [1]	75 mg/l
LC50 - Other aquatic organisms [1]	20.3 ppb
EC50 - Crustacea [1]	15 mg/l
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
LC50 - Fish [1]	> 100 mg/l (96 h; Pisces; Nominal concentration)
LC50 - Fish [2]	70.9 mg/l (96 h; Pisces)
EC50 - Other aquatic organisms [1]	84 mg/l (72 h; Desmodesmus subspicatus; growth rate; ECHA)
ErC50 algae	84 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)
3-Aminopropyltriethoxysilan (919-30-2)	
LC50 - Fish [1]	> 934 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Brachydanio rerio, Semi-static system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	331 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
ErC50 algae	> 1000 mg/l (EU Method C.3, 72 h, Scenedesmus subspicatus, Static system, Fresh water, Experimental value, GLP)

Hazardous to the aquatic environment, long-term (chronic)

Hazardous to the aquatic environment, long-term (chronic)	Harmful to aquatic life with long lasting effects.

m-Xylylenediamine (1477-55-0)	
NOEC (chronic)	4.7 mg/l
NOEC chronic crustacea	4.7 mg/l
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
NOEC (chronic)	2 mg/l (28 d; activated sludge, domestic; respiration rate; ECHA)

Additional ecotoxicological information

2-methyl-1,5-pentanediamine (15520-10-2)	
LOEC (acute)	1800 mg/l
NOEC (acute)	1000 mg/l

2-methyl-1,5-pentanediamine (15520-10-2)	
Phenol, styrenated (61788-44-1)	
NOEC (acute)	3.2 mg/l
Threshold limit - Algae [1]	0.326 mg/l (72 h; Algae)
Threshold limit - Algae [2]	0.14 mg/l (72 h; Algae)
m-Xylylenediamine (1477-55-0)	
LOEC (chronic)	15 mg/l
NOEC (acute)	10.5 mg/kg
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Threshold limit - Algae [1]	10 - 100,Algae
Threshold limit - Algae [2]	84 mg/l (72 h; Scenedesmus subspicatus; Growth rate)

Persistence and degradability

HIT-RE 500 V3, B	
Persistence and degradability	May cause long-term adverse effects in the environment
Phenol, styrenated (61788-44-1)	
Biochemical oxygen demand (BOD)	0.000231 g O_2/g substance
Chemical oxygen demand (COD)	0.004827 g O_2/g substance
3-Aminopropyltriethoxysilan (919-30-2)	
Persistence and degradability	Not readily biodegradable in water

Bioaccumulative potential

HIT-RE 500 V3, B	
Bioaccumulative potential	Not established
2-methyl-1,5-pentanediamine (15520-10-2)	
Partition coefficient n-octanol/water (Log Pow)	0.27 (Estimated value)
Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4)
Phenol, styrenated (61788-44-1)	
BCF - Fish [1]	3246 l/kg (BCFBAF v3.01, Pisces, Fresh water, Weight of evidence, Fresh weight)
BCF - Fish [2]	3246 mg/l
Partition coefficient n-octanol/water (Log Pow)	6.24 – 7.77 (Experimental value; OECD 123: Partition Coefficient (1-Octanol/Water): Slow-Stirring Method)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.145 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Bioaccumulative potential	Bioaccumulative potential
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Partition coefficient n-octanol/water (Log Pow)	0.77 (Literature; 0.219; Experimental value; Equivalent or similar to OECD 107; 21.5 ° C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.32 (log Koc, Calculated value)
Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4)

2-methyl-1,5-pentanediamine (15520-10-2)	
3-Aminopropyltriethoxysilan (919-30-2)	
BCF - Fish [1]	3.4 (OECD 305: Bioconcentration: Flow-Through Fish Test, 8 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	1.7 (QSAR, 20 ° C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500)

Mobility in soil

2-methyl-1,5-pentanediamine (15520-10-2)	
Partition coefficient n-octanol/water (Log Pow)	0.27 (Estimated value)
Phenol, styrenated (61788-44-1)	
Partition coefficient n-octanol/water (Log Pow)	6.24 - 7.77 (Experimental value; OECD 123: Partition Coefficient (1-Octanol/Water): Slow-Stirring Method)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.145 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Ecology - soil	Low potential for mobility in soil.
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Surface tension	No data available in the literature
Partition coefficient n-octanol/water (Log Pow)	0.77 (Literature; 0.219; Experimental value; Equivalent or similar to OECD 107; 21.5 ° C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.32 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.
3-Aminopropyltriethoxysilan (919-30-2)	
Partition coefficient n-octanol/water (Log Pow)	1.7 (QSAR, 20 ° C)
Ecology - soil	No (test)data on mobility of the substance available.

Other adverse effects

Ozone	Not classified
Other information	Avoid release to the environment.

13. Disposal considerations

Waste treatment methods	-
Ecology - waste materials	Avoid release to the environment.
Sewage disposal recommendations	-
Product/Packaging disposal recommendations	After curing, the product can be disposed of with household waste. ,Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations,Packaging contaminated by the product : Dispose in a safe manner in accordance with local/national regulations

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

ADR	IMDG	IATA	RID
14.1. UN number			
UN 3259	UN 3259	UN 3259	UN 3259
14.2. UN proper shipping name			
AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)	AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)	Amines, solid, corrosive, n.o.s. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)	AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)
Transport document description			
UN 3259 AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II, (E)	UN 3259 AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II	UN 3259 Amines, solid, corrosive, n.o.s. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II	UN 3259 AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II
14.3. Transport hazard class(es)			
8	8	8	8
			
14.4. Packing group			
II	II	II	II
14.5. Environmental hazards			
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available			

14.6. Special precautions for user

Overland transport

Classification code (ADR)	C8
Special provisions (ADR)	274
Limited quantities (ADR)	1kg
Packing instructions (ADR)	P002, IBC08
Mixed packing provisions (ADR)	MP10
Transport category (ADR)	2
Orange plates	
Tunnel restriction code (ADR)	E

Transport by sea

Special provisions (IMDG)	274
Limited quantities (IMDG)	1 kg
Packing instructions (IMDG)	P002
EmS-No. (Fire)	F-A
EmS-No. (Spillage)	S-B

Stowage category (IMDG)	A
MFAG-No	154

Air transport

PCA packing instructions (IATA)	859
PCA max net quantity (IATA)	15kg
CAO packing instructions (IATA)	863
Special provisions (IATA)	A3

Rail transport

Special provisions (RID)	274
Limited quantities (RID)	1kg
Packing instructions (RID)	P002, IBC08

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

15. Regulatory information

Applicable regulations

1. Occupational Safety and Health Act
2. Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste
3. Traffic Safety Rule

16. Other information

Literature references	-
Version	1.6
Issue date	2022/12/08
Revision date	2022/12/08
Supersedes	2020/05/13

Section	Changed item	Change	Comments
2	GHS TW classification	Modified	

Abbreviations and acronyms	ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways,ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road,ATE - Acute Toxicity Estimate,BCF - Bioconcentration factor,CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008,DMEL - Derived Minimal Effect level,DNEL - Derived-No Effect Level,IATA - International Air Transport Association,EC50 - Median effective concentration,IMDG - International Maritime Dangerous Goods,LC50 - Median lethal concentration,LD50 - Median lethal dose,LOAEL - Lowest Observed Adverse Effect Level,NOAEC - No-Observed Adverse Effect Concentration,NOAEL - No-Observed Adverse Effect Level,NOEC - No-Observed Effect Concentration,PBT - Persistent Bioaccumulative Toxic,PNEC - Predicted No-Effect Concentration,REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006,RID - Regulations concerning the International Carriage of Dangerous Goods by Rail,SDS - Safety Data Sheet,vPvB - Very Persistent and Very Bioaccumulative
Other information	None

HIT-RE 500 V3, B

According to Taiwan Ministry of Labour Lao-zhi Shou-tzu No. 10702052242, “Regulations for the Labeling and Hazard Communication of Hazardous Chemicals”

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.