

SAFETY DATA SHEET

Dualite MB80

Version 1

Print Date 03/16/2021

US / Z8

1. IDENTIFICATION

Product name : Dualite MB80 :

Product Use Description : Specific use(s): Blowing agent

Company : Chase Corporation Specialty Chemical Intermediates
9 Furman Hall Court
Greenville, SC 29609
United States

Telephone : General Assistance 1-800-323-4182

E-mail address : Not available.

Emergency telephone : Chemtrec (US - 24 hrs) 800-424-0300
Chemtrec (Int'l - 24 hrs) 703-527-3887

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	granular
Color	light yellow
Odor	slight

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Carcinogenicity:

IARC : No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA : No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP : No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Classification	Concentration [% W/W]
2,2,4-Trimethylpentane	540-84-1	Flam. Liq. 2; H225 Skin Irrit. 2; H315 STOT SE 3; H336 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute): 1	>= 10 - < 20
Isopentane	78-78-4	Flam. Liq. 1; H224 STOT SE 3; H336 Asp. Tox. 1; H304 Aquatic Acute 2; H401 Aquatic Chronic 2; H411	>= 5 - < 10

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

General advice : No hazards which require special first aid measures.

Inhalation : Not likely to occur.

Skin contact : No hazards which require special first aid measures.

Eye contact : Rinse with plenty of water.
Remove contact lenses.
Keep eye wide open while rinsing.

Ingestion : Drink water as a precaution.

Notes to physician

Symptoms : No information available.

Risks : No information available.

Treatment : No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water spray
Foam

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- Specific hazards during fire fighting / Specific hazards arising from the chemical : Do not allow run-off from fire fighting to enter drains or water courses.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

See also Section 9. Physical and chemical properties: Safety data

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- Personal precautions : No conditions to be specially mentioned.
- Emergency measures on accidental release : Follow safe handling advice and personal protective equipment recommendations.
- Environmental precautions : Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods for cleaning up / Methods for containment : Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.
- Reference to other sections : For personal protection see section 8.
For disposal considerations see section 13.

7. HANDLING AND STORAGE

Handling

- Advice on safe handling : For personal protection see section 8. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Maintain adequate ventilation when preparing mixtures and during the expansion process. The release of blowing agent is increased during expansion. Dispose of rinse water in accordance with local and national regulations.
- Advice on protection against fire and explosion : Keep away from open flames, hot surfaces and sources of ignition.

Storage

- Requirements for storage areas and containers : Store at room temperature in the original container. Keep container tightly closed in a dry and well-ventilated place.
- Maximum storage temperature: : 50 °C (122 °F)

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Other data : No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Ingredients with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis	Form of exposure
2,2,4-Trimethylpentane	540-84-1	TWA	300 ppm	2016-03-01	ACGIH	
	Further information	:	URT irr: Upper Respiratory Tract irritation			
Isopentane	78-78-4	TWA	1,000 ppm	2014-03-01	ACGIH	
	Further information	:	narcosis respiratory tract irritation			
Dust		TWA	50 Million particles per cubic foot	2011-07-01	OSHA Z-3	total dust
	Further information	:	a: Based on impinger samples counted by light-field techniques. d: All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by this limit, which is the same as the Particulates Not Otherwise Regulated (PNOR) limit in Table Z-1. mppcf X 35.3 = million particles per cubic meter = particles per c.c			
Dust		TWA	15 mg/m ³	2011-07-01	OSHA Z-3	total dust
	Further information	:	d: All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by this limit, which is the same as the Particulates Not Otherwise Regulated (PNOR) limit in Table Z-1.			
Dust		TWA	5 mg/m ³	2011-07-01	OSHA Z-3	respirable fraction
	Further information	:	d: All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by this limit, which is the same as the Particulates Not Otherwise Regulated (PNOR) limit in Table Z-1.			
Dust		TWA	15 Million particles per cubic foot	2011-07-01	OSHA Z-3	respirable fraction
	Further information	:	a: Based on impinger samples counted by light-field techniques. d: All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by this limit, which is the same as the Particulates Not Otherwise Regulated (PNOR) limit in Table Z-1. mppcf X 35.3 = million particles per cubic meter = particles per c.c			

ACGIH: American Conference of Governmental Industrial Hygienists
 BEI: Biological Exposure Index
 MAC: Maximum Allowable Concentration
 NIOSH: National Institute for Occupational Safety and Health
 OEL: OEL: Occupational exposure limit.
 STEL: Short term exposure limit
 TWA: Time Weighted Average

Appropriate engineering controls

Provide appropriate exhaust ventilation at places where dust is formed.

Personal protective equipment

Eye/face protection : Safety glasses

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Hand protection	: Glove material: For prolonged or repeated contact use protective gloves.
	: Glove material: Protective gloves complying with EN 374.
Skin and body protection	: Long sleeved clothing
Respiratory protection	: No personal respiratory protective equipment normally required.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Environmental exposure controls

General advice	: Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.
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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	: granular
Color	: light yellow
Odor	: slight
Odor Threshold	: Not applicable

Safety data

pH	: Not applicable
Melting point/range	: Not applicable
Boiling point/boiling range	: Not applicable
Flash point	: Not applicable
Evaporation rate	: Not applicable
Flammability (solid, gas)	: The product is not flammable.
Flammability (liquids)	: Not applicable
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Vapor pressure	: Not applicable
Relative vapor density	: Not applicable
Density	: 900 kg/m ³
Relative density	: 0.9

Water solubility	: insoluble
Solubility in other solvents	: Dimethylformamide
Partition coefficient: n-octanol/water	: No data available
Autoignition temperature	: > 170 °C
Decomposition temperature	: No data available
Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: Not applicable
Explosive properties	: In use may form flammable/explosive vapor-air mixture.
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Volatile organic compounds (VOC) content	: Weight % : 17 %

This material safety datasheet only contains information relating to safety and does not replace any product information or product specification.

10. STABILITY AND REACTIVITY

Conditions to avoid	: Heat, flames and sparks.
Materials to avoid	: None known.
Hazardous decomposition products	: In case of fire: Carbon monoxide Nitrogen oxides (NOx)
Thermal decomposition	: No data available
Reactivity	: Stable under normal conditions.
Chemical stability	: Stable under recommended storage conditions.
Hazardous reactions	: If the product is stored at temperatures above 60°C the release of blowing agent increases with a risk of explosive air-mixtures.

11. TOXICOLOGICAL INFORMATION

PRODUCT INFORMATION:

Hazard Summary

Acute toxicity	: Not classified based on available information.
Skin corrosion/irritation	: Not classified based on available information.
Serious eye damage/eye irritation	: Not classified based on available information.

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Respiratory or skin sensitization	:	Respiratory sensitization: Not classified based on available information. Skin sensitization: Not classified based on available information.
Germ cell mutagenicity	:	Not classified based on available information.
Carcinogenicity	:	Not classified based on available information.
Reproductive toxicity	:	Not classified based on available information.
STOT-single exposure	:	Not classified based on available information.
STOT-repeated exposure	:	Not classified based on available information.
Aspiration hazard	:	Not classified based on available information.

Potential Health Effects

Inhalation	:	Product dust may be irritating to respiratory system.
Skin	:	Product dust may be irritating to skin.
Eyes	:	Dust contact with the eyes can lead to mechanical irritation.
Ingestion	:	Not irritating.
Aggravated Medical Condition	:	None known.
Symptoms of Overexposure	:	No information available.

Toxicology Assessment

Further information	:	The product is not classified as dangerous to environment or health, as the hazardous substance is encapsulated in the product. A person handling the product will not come in contact with the substance and if spilled it will not escape into the environment.
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Test result

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Expert judgment
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Carcinogenicity:

IARC	:	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	:	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

TOXICOLOGY DATA FOR THE INGREDIENTS:

Test result

Component: 2,2,4-Trimethylpentane

Skin irritation : Result: Irritating to skin.

Target Organ Systemic Toxicant - Single exposure : May cause drowsiness or dizziness.

Aspiration toxicity : The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Component: Isopentane

Acute inhalation toxicity : LC50 (Rat): > 25.3 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Information given is based on data obtained from similar substances.

Target Organ Systemic Toxicant - Single exposure : May cause drowsiness or dizziness.

Aspiration toxicity : The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

12. ECOLOGICAL INFORMATION

PRODUCT INFORMATION:

Ecotoxicology Assessment

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Test result

Ecotoxicity effects

Toxicity to fish : LC50: > 5,000 mg/l
Exposure time: 96 h

Elimination information (persistence and degradability)

Bioaccumulation : Does not bioaccumulate.

Mobility : immobile

Biodegradability : Result: Not readily biodegradable.

Further information on ecology

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Biochemical Oxygen Demand (BOD) : No data available

Hazardous to the ozone layer

Regulation : 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

COMPONENTS:

Ecotoxicology Assessment

Component: 2,2,4-Trimethylpentane

Additional ecological information : Very toxic to aquatic life with long lasting effects.

Component: Isopentane

Additional ecological information : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Test result

Component: 2,2,4-Trimethylpentane

Ecotoxicity effects

Toxicity to fish : LC50: > 0.1 - 1 mg/l
Exposure time: 96 h
see user defined free text

M-Factor (Acute) : 1

Elimination information (persistence and degradability)

Biodegradability : Result: Not readily biodegradable.

Component: Isopentane

Ecotoxicity effects

Toxicity to fish : LC50: > 1 - 10 mg/l
Exposure time: 96 h

Elimination information (persistence and degradability)

Biodegradability : Result: Not readily biodegradable.

13. DISPOSAL CONSIDERATIONS

Disposal : The product should not be allowed to enter drains, water

courses or the soil.

Do not contaminate ponds, waterways or ditches with chemical or used container.

Can be incinerated, when in compliance with local regulations.

If the material is incinerated hazardous fumes are formed.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.

14. TRANSPORT INFORMATION

International Regulations

ADR

Not regulated as a dangerous good

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

TDG

Not regulated as a dangerous good

NOM-002-SCT

Not regulated as a dangerous good

15. REGULATORY INFORMATION

Notification status

DSL : YES. All components of this product are on the Canadian DSL
AICS : YES. On the inventory, or in compliance with the inventory
NZIoC : YES. On the inventory, or in compliance with the inventory
ENCS : YES. On the inventory, or in compliance with the inventory
ISHL : NO. Not in compliance with the inventory
KECI : YES. On the inventory, or in compliance with the inventory
PICCS : YES. On the inventory, or in compliance with the inventory
IECSC : YES. On the inventory, or in compliance with the inventory
TCSI : NO. Not in compliance with the inventory
TSCA : YES. All chemical substances in this product are either listed on the TSCA Inventory or in compliance with a TSCA Inventory exemption.

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For explanation of abbreviations, see section 16.

TSCA list

TSCA 5(a)(2) : No substances are subject to a Significant New Use Rule.
TSCA 12(b) : No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)
2,2,4-Trimethylpentane	540-84-1	1000 lbs

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):
2,2,4-Trimethylpentane 540-84-1 10 - 20 %

The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):
Isopentane 78-78-4 5 - 10 %

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489):
Isopentane 78-78-4 5 - 10 %

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Acrylonitrile 107-13-1 0 - 0.1 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Acrylonitrile 107-13-1 0 - 0.1 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

California Prop. 65



WARNING:

This product can expose you to chemicals including Acrylonitrile, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

16. OTHER INFORMATION**Full text of H-Statements**

H224	: Extremely flammable liquid and vapor.
H225	: Highly flammable liquid and vapor.
H304	: May be fatal if swallowed and enters airways.
H315	: Causes skin irritation.
H336	: May cause drowsiness or dizziness.
H400	: Very toxic to aquatic life.
H401	: Toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.
H411	: Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
OSHA Z-3	: USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA	: 8-hour, time-weighted average
OSHA Z-3 / TWA	: 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Further information

HMIS Classification	: Health Hazard: 0 Flammability: 1 Physical hazards: 0
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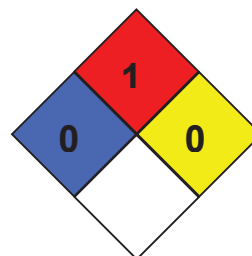
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NFPA Classification : Health Hazard: 0
Fire Hazard: 1
Reactivity Hazard: 0



Notification status explanation

REACH	1907/2006 (EU)
DSL	Canadian Domestic Substances List (DSL)
AICS	Australia Inventory of Chemical Substances (AICS)
NZIoC	New Zealand. Inventory of Chemical Substances
ENCS	Japan. ENCS - Existing and New Chemical Substances Inventory
ISHL	Japan. ISHL - Inventory of Chemical Substances
KECI	Korea. Korean Existing Chemicals Inventory (KECI)
PICCS	Philippines Inventory of Chemicals and Chemical Substances (PICCS)
IECSC	China. Inventory of Existing Chemical Substances in China (IECSC)
TCSI	Taiwan Chemical Substance Inventory (TCSI)
TSCA	United States TSCA Inventory

The information in this material safety data sheet should be provided to all who will use, handle, store, transport or otherwise be exposed to this product. The user must determine the appropriate measures that need to be implemented for the use and handling of this product in the context of the user's operations and use of this product. The information contained herein supersedes all previously issued bulletins on the subject matter covered. If the date on this document is more than three years old, call to make certain that this sheet is current. No warranty is made as to the product's merchantability or fitness for any particular purpose, or that any suggested use will not infringe any patent. User must determine for himself, by preliminary tests or otherwise, the suitability of this product for his purposes, including mixing with other products. Nothing contained herein shall be construed as granting or extending any license under any patent.

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.