

Safety Data Sheet (SDS) Report

SDS number: SZHH01531514

Applicant: MELISSA & DOUG LLC

UNIT 2H, BLOCK 210 TAI RAN,INDUSTRIAL ZONE SHENNAN XI,ROAD, FUTIAN DISTRICT,SHENZHEN..

Issue Date: 2021-01-18

Sample Description:

The sample information was submitted and identified on client's behalf to be:

Product Name : DUSTLESS CHALKS

Physical State : Solid

Data Received : Jan 08, 2021 Data Reviewed : Jan 18, 2021

Service Requested:

Based on the information provided by the applicant, the Safety Data Sheet (SDS) was generated in accordance with requirements of Global Harmonized System (GHS), for details please refer to attached pages.

Authorized By:

On Behalf Of Regulatory Affairs in Intertek Testing Services Ltd., Shanghai

Anna Wang Technique Manager This report shall not be reproduced except in full, without the written approval of the laboratory.

Intertek Health, Environmental & Regulatory Services (HERS)

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Item Numbers: 76306-1002 Page 1 of 29

according to the United Nations GHS (Rev. 7, 2017)

Issue date: 1/18/2021 Revision date:1/18/2021 Version: 1.0 SDS number: SZHH01531514

SECTION 1: Identification 1.1. GHS Product identification

GHS Product identifier

Product form : Mixture

: DUSTLESS CHALKS Trade name

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use: Writing and doodle

Supplier's details

MELISSA & DOUG LLC

UNIT 2H, BLOCK 210 TAI RAN, INDUSTRIAL ZONE SHENNAN XI, ROAD,

FUTIAN DISTRICT, SHENZHEN, CHINA.

T 800-284-3948

JMcGarry@MelissaAndDoug.com

Emergency phone number

0086-712-3234990

SECTION 2: Hazard identification

Classification of the substance or mixture

Classification according to the United Nations GHS

Not classified

Adverse physicochemical, human health and environmental effects

: To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice

GHS Label elements, including precautionary statements

Labelling according to the United Nations GHS

No labelling applicable

Other hazards which do not result in classification

No additional information available

SECTION 3: Composition/information on ingredients

Substances

Not applicable

3.2. **Mixtures**

Name	Product identifier	%	
White			
Calcium sulfate dihydrate	(CAS-No.) 10101-41-4	95	
Water	(CAS-No.) 7732-18-5	5	
Blue			
Calcium sulfate dihydrate	(CAS-No.) 10101-41-4	99.25	
Water	(CAS-No.) 7732-18-5	0.5	
C.I. Pigment Blue 15	(CAS-No.) 147-14-8	0.25	
Green			
Calcium sulfate dihydrate	(CAS-No.) 10101-41-4	99	
Water	(CAS-No.) 7732-18-5	0.5	
C.I. Pigment Green 7	(CAS-No.) 1328-53-6	0.5	
Yellow			

1/18/2021 EN (English) 1/7

Page 2 of 29 Item Numbers: 76306-1002

according to the United Nations GHS (Rev. 7, 2017)

Calcium sulfate dihydrate	(CAS-No.) 10101-41-4	99
Water	(CAS-No.) 7732-18-5	0.5
C.I. Pigment Yellow 74	(CAS-No.) 6358-31-2	0.5
Pink		
Calcium sulfate dihydrate	(CAS-No.) 10101-41-4	99.25
Water	(CAS-No.) 7732-18-5	0.5
C.I. Pigment Red 112	(CAS-No.) 6535-46-2	0.25

SECTION 4: First-aid measures

Description of necessary first-aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

No additional information available

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

Suitable extinguishing media 5.1.

Suitable extinguishing media : Water spray. Dry powder. Foam.

Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective actions for fire-fighters

Protective equipment for firefighters : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures : Ventilate spillage area.

For emergency responders 6.1.2.

: Do not attempt to take action without suitable protective equipment. For further information Protective equipment

refer to section 8: "Exposure controls/personal protection"

6.2. **Environmental precautions**

Avoid release to the environment.

Methods and materials for containment and cleaning up

Methods for cleaning up : Mechanically recover the product.

Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions Store in a well-ventilated place. Keep cool.

Suitable packaging material : Carton

SECTION 8: Exposure controls/personal protection

8.1. **Control parameters**

No additional information available

1/18/2021 EN (English) 2/7

Page 3 of 29 Item Numbers: 76306-1002

according to the United Nations GHS (Rev. 7, 2017)

Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

: Protective gloves Hand protection Eye protection : Safety glasses

Skin and body protection : Wear suitable protective clothing

: In case of insufficient ventilation, wear suitable respiratory equipment Respiratory protection

Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

Basic physical and chemical properties Physical state Solid

Colour : White,blue,green,yellow,pink

Odour : Not available Odour threshold Not available Melting point Not available Freezing point Not applicable Boiling point : Not available Flammability : Non flammable. Explosive limits : Not applicable Lower explosive limit (LEL) : Not applicable Upper explosive limit (UEL) : Not applicable Flash point : Not applicable Auto-ignition temperature : Not applicable Decomposition temperature : Not available : Not available рΗ pH solution : Not available Viscosity, kinematic (calculated value) (40 °C) : Not applicable Partition coefficient n-octanol/water (Log Kow) : Not available : Not available Vapour pressure Vapour pressure at 50 °C Not available Density : Not available Relative density : Not available Relative vapour density at 20 °C : Not applicable Solubility : Not available Particle size : Not available Particle size distribution : Not available · Not available Particle shape

Data relevant with regard to physical hazard classes (supplemental)

: Not available

: Not available

No additional information available

Particle specific surface area

SECTION 10: Stability and reactivity

Particle aspect ratio

10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

EN (English) 1/18/2021 3/7

Page 4 of 29 Item Numbers: 76306-1002

according to the United Nations GHS (Rev. 7, 2017)

Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity (oral) Based on available data, the classification criteria are not met : Based on available data, the classification criteria are not met Acute toxicity (dermal) Acute toxicity (inhalation) : Based on available data, the classification criteria are not met

C.I. Pigment Blue 15 (147-14-8)	
LD50 oral rat	> 10000 mg/kg
C.I. Pigment Green 7 (1328-53-6)	
LD50 oral rat	> 5000 mg/kg
Skin corrosion/irritation	: Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Based on available data, the classification criteria are not met
Carcinogenicity	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Based on available data, the classification criteria are not met
STOT-single exposure	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Based on available data, the classification criteria are not met
Aspiration hazard	: Based on available data, the classification criteria are not met

DUSTLESS CHALKS	
Viscosity, kinematic	Not applicable

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short-term : Based on available data, the classification criteria are not met (acute)

Hazardous to the aquatic environment, long-term : Based on available data, the classification criteria are not met

C.I. Pigment Green 7 (1328-53-6)

LC50 - Fish [1] 752.4 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

12.2. Persistence and degradability

DUSTLESS CHALKS

Persistence and degradability No additional information available

12.3. **Bioaccumulative potential**

DUSTLESS CHALKS

Bioaccumulative potential No additional information available

1/18/2021 EN (English) 4/7

Page 5 of 29 Item Numbers: 76306-1002

according to the United Nations GHS (Rev. 7, 2017)

C.I. Pigment Blue 15 (147-14-8)	
BCF - Fish [1]	0.3 – 11
Partition coefficient n-octanol/water (Log Kow)	6.6 (at 25 °C)
C.I. Pigment Green 7 (1328-53-6)	
BCF - Fish [1]	0.51 – 74

12.4. **Mobility in soil**

DUSTLESS CHALKS	
Mobility in soil No additional information available	

12.5. Other adverse effects

Ozone : Not classified

Other adverse effects : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods
Waste treatment methods

: Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information In accordance with UN RTDG / IMDG / IATA /

UN RTDG	IMDG	IATA
14.1. UN number		
Not regulated for transport		
14.2. UN Proper Shipping Name		
Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)		
Not regulated	Not regulated	Not regulated
Not regulated	Not regulated	Not regulated
14.4. Packing group		
Not regulated	Not regulated	Not regulated
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No
No supplementary information available		

14.6. Special precautions for user

- UN RTDG

Not regulated

- IMDG

Not regulated

- IATA Not regulated

14.7. Transport in bulk according to IMO instruments

Not applicable

EN (English) 1/18/2021 5/7

Page 6 of 29 Item Numbers: 76306-1002

according to the United Nations GHS (Rev. 7, 2017)

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Water (7732-18-5)

Listed on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

C.I. Pigment Blue 15 (147-14-8)

Listed on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Listed on the Canadian DSL (Domestic Substances List)

Listed on the EEC inventory ÈINECS (European Inventóry of Existing Commercial Chemical Substances)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

C.I. Pigment Green 7 (1328-53-6)

Listed on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Listed on the Canadian DSL (Domestic Substances List)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

C.I. Pigment Yellow 74 (6358-31-2)

Listed on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Listed on the Canadian DSL (Domestic Substances List)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

1/18/2021 EN (English) 6/7

Page 7 of 29 Item Numbers: 76306-1002

according to the United Nations GHS (Rev. 7, 2017)

C.I. Pigment Red 112 (6535-46-2)

Listed on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory Listed on the Canadian DSL (Domestic Substances List)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on PICCS (Australian Inventory of Chemicals and Chemical Substances)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

SECTION 16: Other information

Other information : None.

Safety Data Sheet (SDS), UN

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.

1/18/2021 EN (English) 7/7

Page 8 of 29 Item Numbers: 76306-1002

Safety Data Sheet (SDS) Report

Applicant: Melissa & Doug. LLC, (Shenzhen office)

Unit 2H, Block 210 Tai Ran Industrial Zone ShenNan Xi Road,

Futian District Shenzhen

SDS number: SHAH01259467

2020-10-27

Sample Description:

The sample information was submitted and identified on client's behalf to be:

Product Name : Poster paint(ready mix) – black(pms black)/white(pms white)/blue(pms cyan/pms process blue/pms reflex blue/pms

072/pms 290/pms 299/pms 306/pms 291)/brown(pms 464/pms 463/pms 471)/gray(pms 7543)/green(pms 348/pms 354/pms 355/pms 356/pms 368)/orange(pms 021/pms 1375)/pink(pms 210/pms 211/pink flesh pms 489)/purple(pms purple/pms 2583/pms 2597/pms 2645)/red(pms 185/pms 485)/yellow(pms yellow/pms 113/pms

Issue Date:

134)

Physical State : Liquid

Data Received : Oct 20, 2020

Data Reviewed : Oct 27, 2020

Service Requested:

Based on the information provided by the applicant, the Safety Data Sheet (SDS) was generated in accordance with requirements of Global Harmonized System (GHS), for details please refer to attached pages.

Authorized By:

On Behalf Of Regulatory Affairs in Intertek Testing Services Ltd., Shanghai

Anna Wang

Regulatory Consultant

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Intertek Health, Environmental & Regulatory Services (HERS)

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Item Numbers: 76306-1002 Page 9 of 29

: Mixture



Poster paint(ready mix) – black(pms black)/white(pms white)/blue(pms cyan/pms process blue/pms reflex blue/pms 072/pms 290/pms 299/pms 306/pms 291)/brown(pms 464/pms 463/pms 471)/gray(pms 7543)/green(pms 348/pms 354/pms 355/pms 356/pms 368)/orange(pms 021/pms 1375)/pink(pms 210/pms 211/pink flesh pms 489)/purple(pms purple/pms 2583/pms 2597/pms 2645)/red(pms 185/pms 485)/yellow (pms yellow/pms 113/pms 134)

Date of issue: 27/10/2020

Version: 1.0
according to the United Nations GHS (Rev. 7, 2017)

SDS number: SHAH01259467

SECTION 1: Identification

1.1. GHS Product identifier

Product form

Trade name : Poste

: Poster paint(ready mix) – black(pms black)/white(pms white)/blue(pms cyan/pms process blue/pms reflex blue/pms 072/pms 290/pms 299/pms 306/pms 291)/brown(pms 464/pms 463/pms 471)/gray(pms 7543)/green(pms 348/pms 354/pms 355/pms 356/pms 368)/orange(pms 021/pms 1375)/pink(pms 210/pms 211/pink flesh pms 489)/purple(pms purple/pms 2583/pms 2597/pms 2645)/red(pms 185/pms 485)/yellow(pms yellow/pms 113/pms 134)

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Pigment

1.4. Supplier's details

Melissa & Doug. LLC, (Shenzhen office)

Unit 2H, Block 210 Tai Ran Industrial Zone ShenNan Xi Road, Futian District Shenzhen

1.5. Emergency phone number

No additional information available

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Not classified

Adverse physicochemical, human health and environmental effects

: To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice

2.2. GHS Label elements, including precautionary statements

Labelling according to the United Nations GHS

No labelling applicable

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Water	(CAS-No.) 7732-18-5	72.824 – 75.559
Sorbitol	(CAS-No.) 50-70-4	12.543 – 13.032
Calcium carbonate	(CAS-No.) 471-34-1	9.2 – 9.64
Titanium dioxide	(CAS-No.) 13463-67-7	≤ 3.2
FD & C Yellow no. 5	(CAS-No.) 12225-21-7	≤ 1.82
FD&C Red no.33	(CAS-No.) 3567-66-6	≤ 1.8
Carbon Black	(CAS-No.) 1333-86-4	≤ 1.375

27/10/2020 EN (English) 1/9

Item Numbers: 76306-1002 Page 10 of 29

Poster paint(ready mix) = black/white(pms white)/blue(pms cyan/pms process blue/pms reflex blue/pms 072/pms 290/pms 299/pms 306/pms 291)/brown(pms 464/pms 463/pms 471)/gray(pms 7543)/green(pms 348/pms 354/pms 355/pms 356/pms 368)/orange(pms 021/pms 1375)/pink(pms 210/pms 211/pink flesh pms 489)/purple(pms purple/pms 2583/pms 2597/pms 2645)/red(pms 185/pms 485)/yellow (pms yellow/pms 113/pms 134)

Safety Data Sheet

according to the United Nations GHS (Rev. 7, 2017)

FD & C Blue no. 1	(CAS-No.) 68921-42-6	≤ 1.08
Carboxymethyl cellulose sodium salt	(CAS-No.) 9004-32-4	0.932 - 0.969
2-phenoxyethanol	(CAS-No.) 122-99-6	0.5
Alcohols, C12-14-secondary, ethoxylated	(CAS-No.) 84133-50-6	0.131 - 0.305
Poly(dimethylsiloxane)	(CAS-No.) 63148-62-9	0.006 - 0.015

SECTION 4: First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

No additional information available

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective actions for fire-fighters

Protective equipment for firefighters : Do not attempt to take action without suitable protective equipment. Self-contained breathing

apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection"

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

27/10/2020 EN (English) 2/9

Item Numbers: 76306-1002 Page 11 of 29

Poster paint(ready mx) = black(pms black)/white(pms white)/blue(pms cyan/pms process blue/pms reflex blue/pms 072/pms 290/pms 299/pms 306/pms 291)/brown(pms 464/pms 463/pms 471)/gray(pms 7543)/green(pms 348/pms 354/pms 355/pms 356/pms 368)/orange(pms 021/pms 1375)/pink(pms 210/pms 211/pink flesh pms 489)/purple(pms purple/pms 2583/pms 2597/pms 2645)/red(pms 185/pms 485)/yellow (pms yellow/pms 113/pms 134)

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SECTION 8: Exposure controls/personal protection 8.1. Control parameters		
Calcium carbonate (471-34-1)		
USA - ACGIH - Occupational Exposure Limits		
ACGIH TWA (mg/m³)	10 mg/m³	
Titanium dioxide (13463-67-7)		
USA - ACGIH - Occupational Exposure Limits		
Local name	Titanium dioxide	
ACGIH TWA (mg/m³)	10 mg/m³	
Remark (ACGIH)	TLV® Basis: LRT irr. Notations: A4 (Not classifiable as a Human Carcinogen)	
ACGIH chemical category	Not Classifiable as a Human Carcinogen	
Regulatory reference ACGIH 2020		
Carbon Black (1333-86-4)		
USA - ACGIH - Occupational Exposure Limits		
Local name	Carbon black	
ACGIH TWA (mg/m³)	3 mg/m³ (inhalable particulate matter)	
Remark (ACGIH)	TLV® Basis: Bronchitis. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)	
ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans	
Regulatory reference	ACGIH 2020	

Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

Individual protection measures, such as personal protective equipment (PPE)

Hand protection : Protective gloves Eye protection : Safety glasses

Skin and body protection : Wear suitable protective clothing

: In case of insufficient ventilation, wear suitable respiratory equipment Respiratory protection

Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical	properties
Physical state	: Liquid
Colour	: Not available
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non-flammable
Explosive limits	: Not available
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: Not available

27/10/2020 EN (English) 3/9 Poster paint(ready mix) — black(pms black)/white(pms white)/blue(pms cyan/pms process blue/pms reflex blue/pms 072/pms 290/pms 299/pms 306/pms 291)/brown(pms 464/pms 463/pms 471)/gray(pms 7543)/green(pms 348/pms 354/pms 355/pms 356/pms 368)/orange(pms 021/pms 1375)/pink(pms 210/pms 211/pink flesh pms 489)/purple(pms purple/pms 2583/pms 2597/pms 2645)/red(pms 185/pms 485)/yellow (pms yellow/pms 113/pms 134)

Safety Data Sheet

according to the United Nations GHS (Rev. 7, 2017)

Auto-ignition temperature : Not available Decomposition temperature : Not available рΗ : Not available : Not available pH solution Viscosity, kinematic (calculated value) (40 °C) : Not available Partition coefficient n-octanol/water (Log Kow) Not available Vapour pressure : Not available Vapour pressure at 50 °C : Not available Density : Not available Not available Relative density Relative vapour density at 20 °C : Not available : Not available Particle size : Not available Particle size distribution : Not available Particle shape : Not available Particle aspect ratio : Not available Particle specific surface area : Not available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Based on available data, the classification criteria are not met.

Acute toxicity (dermal) : Based on available data, the classification criteria are not met.

Acute toxicity (inhalation) : Based on available data, the classification criteria are not met.

Carboxymethyl cellulose sodium salt (9004-32-4)	
LD50 oral rat	27000 mg/kg
LC50 Inhalation - Rat	> 5800 mg/m³ (Exposure time: 4 h)
Calcium carbonate (471-34-1)	
LD50 oral rat	6450 mg/kg
Sorbitol (50-70-4)	
LD50 oral rat 15900 mg/kg	

27/10/2020 EN (English) 4/9

Item Numbers: 76306-1002 Page 13 of 29

5/9

Poster paint(ready mix) = black/white(pms white)/blue(pms cyan/pms process blue/pms reflex blue/pms 072/pms 290/pms 299/pms 306/pms 291)/brown(pms 464/pms 463/pms 471)/gray(pms 7543)/green(pms 348/pms 354/pms 355/pms 356/pms 368)/orange(pms 021/pms 1375)/pink(pms 210/pms 211/pink flesh pms 489)/purple(pms purple/pms 2583/pms 2597/pms 2645)/red(pms 185/pms 485)/yellow (pms yellow/pms 113/pms 134)

Safety Data Sheet

according to the United Nations GHS (Rev. 7, 2017)

Titanium dioxide (13463-67-7)	
LD50 oral rat	> 10000 mg/kg
LD50 dermal rat	> 10000 mg/kg
Carbon Black (1333-86-4)	
LD50 oral rat	> 15400 mg/kg
2-phenoxyethanol (122-99-6)	
LD50 oral rat	1850 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
Skin corrosion/irritation	: Based on available data, the classification criteria are not met.
Serious eye damage/irritation	: Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	: Based on available data, the classification criteria are not met.
Germ cell mutagenicity	: Based on available data, the classification criteria are not met.
Carcinogenicity	: Based on available data, the classification criteria are not met.
Reproductive toxicity	: Based on available data, the classification criteria are not met.
STOT-single exposure	: Based on available data, the classification criteria are not met.
STOT-repeated exposure	: Based on available data, the classification criteria are not met.
Aspiration hazard	: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

4	12 1	F _O >	rio	4

Ecology - general The product is not considered harmful to aquatic organisms nor to cause long-term adverse

effects in the environment.

Hazardous to the aquatic environment, short-term : Based on available data, the classification criteria are not met.

27/10/2020

Hazardous to the aquatic environment, long-term : Based on available data, the classification criteria are not met. (chronic)

EN (English)

Calcium carbonate (471-34-1)		
LC50 fish 1 > 100 mg/l		
EC50 other aquatic organisms 1	> 100 mg/l waterflea	
EC50 96h algae (1) 22000 mg/l Source: Ecological Structure Activity Relationships		
Carbon Black (1333-86-4)		
EC50 72h algae (1)	> 10000 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)	
ErC50 (algae)	> 10000 mg/l 72 hours OECD 201	
2-phenoxyethanol (122-99-6)		
LC50 fish 1	344 mg/l	
EC50 Daphnia 1	> 500 mg/l	
EC50 72h algae (1)	> 500 mg/l	

Persistence and degradability

Poster paint(ready mix) – black(pms black)/white(pms white)/blue(pms cyan/pms process blue/pms reflex blue/pms 072/pms 290/pms 299/pms 306/pms 291)/brown(pms 464/pms 463/pms 471)/gray(pms 7543)/green(pms 348/pms 354/pms 355/pms 356/pms 368)/orange(pms 021/pms 1375)/pink(pms 210/pms 211/pink flesh pms 489)/purple(pms purple/pms 2583/pms 2597/pms 2645)/red/pms 485/pms 485)/yellow/pms yellow/pms 113/pms 134)

2303/pm3 233//pm3 2043/red(pm3 103/pm3 403/ryenow(pm3 yenow/pm3 113/pm3 134/		
Persistence and degradability	No additional information available	

Page 14 of 29 Item Numbers: 76306-1002

Poster paint(ready mx) = black(pms black)/white(pms white)/blue(pms cyan/pms process blue/pms reflex blue/pms 072/pms 290/pms 299/pms 306/pms 291)/brown(pms 464/pms 463/pms 471)/gray(pms 7543)/green(pms 348/pms 354/pms 355/pms 356/pms 368)/orange(pms 021/pms 1375)/pink(pms 210/pms 211/pink flesh pms 489)/purple(pms purple/pms 2583/pms 2597/pms 2645)/red(pms 185/pms 485)/yellow (pms yellow/pms 113/pms 134)

Safety Data Sheet

according to the United Nations GHS (Rev. 7, 2017)

12.3. Bioaccumulative potential

Poster paint(ready mix) – black(pms black)/white(pms white)/blue(pms cyan/pms process blue/pms reflex blue/pms 072/pms 290/pms 299/pms 306/pms 291)/brown(pms 464/pms 463/pms 471)/gray(pms 7543)/green(pms 348/pms 354/pms 355/pms 356/pms 368)/orange(pms 021/pms 1375)/pink(pms 210/pms 211/pink flesh pms 489)/purple(pms purple/pms 2583/pms 2597/pms 2645)/red(pms 185/pms 485)/yellow(pms yellow/pms 113/pms 134)

Bioaccumulative potential No additional information available

Calcium carbonate (471-34-1)	
BCF fish 1	(no bioaccumulation)
Partition coefficient n-octanol/water (Log Kow)	-2.12

12.4. Mobility in soil

Poster paint(ready mix) – black(pms black)/white(pms white)/blue(pms cyan/pms process blue/pms reflex blue/pms 072/pms 290/pms 299/pms 306/pms 291)/brown(pms 464/pms 463/pms 471)/gray(pms 7543)/green(pms 348/pms 354/pms 355/pms 356/pms 368)/orange(pms 021/pms 1375)/pink(pms 210/pms 211/pink flesh pms 489)/purple(pms purple/pms 2583/pms 2597/pms 2645)/red(pms 185/pms 485)/yellow(pms yellow/pms 113/pms 134)

Mobility in soil No additional information available

Calcium carbonate (471-34-1)

Mobility in soil 4.971 Source: Quantitative Structure Activity Relation

12.5. Other adverse effects

Ozone : Not classified

Other adverse effects : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with IMDG / IATA / UN RTDG

UN RTDG	IMDG	IATA
14.1. UN number		
Not regulated for transport		
14.2. UN Proper Shipping Name		
Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)		
Not regulated	Not regulated	Not regulated
Not regulated	Not regulated	Not regulated
14.4. Packing group		
Not regulated	Not regulated	Not regulated
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No

27/10/2020 EN (English) 6/9

Item Numbers: 76306-1002 Page 15 of 29

Poster paint(ready mix) = black/white(pms white)/blue(pms cyan/pms process blue/pms reflex blue/pms 072/pms 290/pms 299/pms 306/pms 291)/brown(pms 464/pms 463/pms 475)/gray(pms 240/pms 240/p 7543)/green(pms 348/pms 354/pms 355/pms 356/pms 368)/orange(pms 021/pms 1375)/pink(pms 210/pms 211/pink flesh pms 489)/purple(pms purple/pms 2583/pms 2597/pms 2645)/red(pms 185/pms 485)/yellow (pms yellow/pms 113/pms 134)

Safety Data Sheet

according to the United Nations GHS (Rev. 7, 2017)

No supplementary information available

14.6. Special precautions for user

- UN RTDG

No data available

· IMDG

No data available

- IATA

No data available

14.7. Transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question National regulations

Water (7732-18-5)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Carboxymethyl cellulose sodium salt (9004-32-4)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Calcium carbonate (471-34-1)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Sorbitol (50-70-4)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Japanese ISHL (Industrial Safety and Health Law) Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Titanium dioxide (13463-67-7)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

27/10/2020 EN (English) 7/9 Poster paint(ready mix) - black(pms black)/white(pms white)/blue(pms cyan/pms process blue/pms reflex blue/pms 072/pms 290/pms 299/pms 306/pms 291)/brown(pms 464/pms 463/pms 471)/gray(pms 7543)/green(pms 348/pms 354/pms 355/pms 356/pms 368)/orange(pms 021/pms 1375)/pink(pms 210/pms 211/pink flesh pms 489)/purple(pms purple/pms 2583/pms 2597/pms 2645)/red(pms 185/pms 485)/yellow (pms yellow/pms 113/pms 134)

Safety Data Sheet

according to the United Nations GHS (Rev. 7, 2017)

FD & C Yellow no. 5 (12225-21-7)

Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

FD&C Red no.33 (3567-66-6)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Carbon Black (1333-86-4)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

FD & C Blue no. 1 (68921-42-6)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Alcohols, C12-14-secondary, ethoxylated (84133-50-6)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Japanese Pollutant Release and Transfer Register Law (PRTR Law)

Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

Poly(dimethylsiloxane) (63148-62-9)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on KECL/KECI (Korean Existing Chemicals Inventory)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

SECTION 16: Other information

Issue date 27/10/2020 Revision date 27/10/2020

Abbreviations and acronyms:

27/10/2020 EN (English) 8/9 Page 18 0
Poster paint(ready mx) = black(pms black)/white(pms white)/blue(pms cyan/pms process blue/pms reflex blue/pms 072/pms 290/pms 299/pms 306/pms 291)/brown(pms 464/pms 463/pms 471)/gray(pms 7543)/green(pms 348/pms 354/pms 355/pms 356/pms 368)/orange(pms 021/pms 1375)/pink(pms 210/pms 211/pink flesh pms 489)/purple(pms purple/pms 2583/pms 2597/pms 2645)/red(pms 185/pms 485)/yellow (pms yellow/pms 113/pms 134)

Safety Data Sheet

according to the United Nations GHS (Rev. 7, 2017)

IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
PBT	Persistent Bioaccumulative Toxic
SDS	Safety Data Sheet
NOAEL	No Observed Adverse Effect Level
EC50	Median effective concentration

SDS UN

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.

27/10/2020 EN (English) 9/9



Centre Testing International Group

SDS

Report No.: A2200116971101001

Applicant: MELISSA & DOUG, LLC

Address : UNIT 2H, BLOCK 210 TAIRAN INDUSTRIAL ZONE

SHENNAN XI ROAD, FUTIAN DISTRICT SHENZHEN,

CHINA518040

Sample Name: Dry-Erase Marker (blue)

Reviewed by: Gu Cui Li

Approved by: Chen kaim

Issue date: May 15, 2020

No. T227296216



Dry-Erase Marker (blue)

Version: V1.0.0.1

Report No.: A2200116971101001 Creation Date: 2020/05/15 Revision Date: 2020/05/15

*Prepared according to UN GHS (the 8th revised edition)

1 Identification of the chemical and supplier

I Product identifier

Product Name	Dry-Erase Marker (blue)
Common Name/Trade Name	Dry-Erase Marker (blue)
CAS No.	Not applicable
EC No.	Not applicable
Molecular Formula	Not applicable

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Write and painting.
Uses advised against	None.

Details of the supplier of the Safety Data Sheet

Name of the company	Melissa & Doug, LLC
Address of the company	Unit 2H, Block 210 TaiRan Industrial Zone ShenNan Xi Road, Futian District Shenzhen, China518040
Post code	
Telephone number	800-284-3948
Fax number	
E-mail address	JMcGarry@MelissaAndDoug.com

| Emergency phone number

Emergency phone number	800-284-3948
number	000-204-3340

2 Hazards identification

Hazard classification according to GHS

Hazard classification	Not applicable
according to GHS	Not applicable

Label elements

Hazard pictograms	Not applicable
Signal word	Not applicable



| Hazard statements

Hazard statements	Not applicable
Precautionary statement	S
◆ Prevention	
Prevention	Not applicable
◆ Response	
Response	Not applicable
◆ Storage	
Storage	Not applicable
◆ Disposal	
Disposal	Not applicable
Hazard description	
 Physical and chemical I 	nazards
	Liquid, soluble in water, no harm in general situation.
◆ Health hazards	
Inhaled	Inhalation of the product may produce adverse health effects or irritation of the respiratory tract following discomfort.

◆ Environmental hazards

Ingestion

Eye

Skin Contact

Please refer to 12th chapter of SDS.

produce systemic injury with harmful effects.

3 Composition/information on ingredients

Component	Cas No.	EC No.	Concentration (weight percent, %)
Dioctyl adipate	103-23-1	203-090-1	15~25
Pigment Blue	1345-16-0	310-193-6	10~18
Polyvinyl Butyral	63148-65-2	613-158-6	5~10
Ethanol	64-17-5	200-578-6	3~5
Water	7732-18-5	231-791-2	40~50

4 First aid measures

Description of first aid measures

General advice Immediate medical attention is required. Show this safety data sheet (SDS) to the

Accidental ingestion of the product may be harmful to the health of the individual. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may

This product may cause temporary discomfort following direct contact with the eye.



	doctor in attendance.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
Skin contact	No harm in general situation. First aid is not needed.
Ingestion	Never give anything by mouth to an unconscious person. Call a physician immediately.
Inhalation	Move victim into fresh air. If breathing is difficult, give oxygen and consult a physician immediately.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

1 Please see section 11.

Indication of any immediate medical attention and special treatment needed

- 1 Treat symptomatically.
- 2 Symptoms may be delayed.

5 Firefighting measures

| Extinguishing media

Suitable extinguishing	Use extinguishing media suitable for surrounding area.	
Unsuitable extinguishing	There is no restriction on the type of extinguisher which may be used	
media	here is no restriction on the type of extinguisher which may be used.	

Specific hazards arising from the substance or mixture

- 1 Development of hazardous combustion gases or vapor possible in the event of fire.
- 2 Not considered a significant fire risk, however containers may burn.

Advice for firefighters

- As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
- 2 Fight fire from a safe distance, with adequate cover.
- 3 Prevent fire extinguishing water from contaminating surface water or the ground water system.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

- Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
- 2 Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
- 3 Use personal protective equipment. Avoid breathing vapours, mist or gas.

| Environmental precautions

- 1 Prevent further leakage or spillage if safe to do so.
- 2 Discharge into the environment must be avoided.



Methods and materials for containment and cleaning up

- Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
- Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
- 3 Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7 Handling and storage

| Precautions for handling

- 1 Handling is performed in a well ventilated place.
- 2 Avoid contact with eyes.
- 3 Keep away from heat/sparks/open flames/ hot surfaces.

Precautions for storage

- 1 Keep containers tightly closed.
- 2 Keep containers in a dry, cool and well-ventilated place.
- 3 Keep away from heat/sparks/open flames/hot surfaces.
- 4 Store away from incompatible materials and foodstuff containers.

8 Exposure controls/personal protection

| Control parameters

◆ Occupational Exposure limit values

C	Country/Domina	Limit value - Eight hours		Limit value - Short term	
Component	Country/Region	ppm	mg/m³	ppm	mg/m³
Dioctyl adipate 103-23-1	Poland	-	400	-	-
	USA - OSHA	1000	1900	-	-
	South Korea	1000	1900	-	<u>-</u>
Ethanol	Ireland	-	-	1000	-
64-17-5	Germany (AGS)	500	960	1000	1920
	Denmark	1000	1900	2000	3800
	Australia	1000	1880	-	-

Biological limit values

Biological limit values No relevant regulations

- Monitoring methods
- EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
- 2 GBZ/T 160.1~GBZ/T 160.81-2004 Determination of toxic substances in workplace air (Series standard).



| Engineering controls

- Ensure adequate ventilation, especially in confined areas.Ensure that eyewash stations and safety showers are close to the workstation location.
- 3 Set up emergency exit and necessary risk-elimination area.
- 4 Handle in accordance with good industrial hygiene and safety practice.

| Personal protection equipment

General requirement	No special requirements, please see the description below.
Eye protection	In general situation, eye protection is not needed. In the production process, when contacting with vapour, tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US).
Hand protection	In general situation, hand protection is not needed.
Respiratory protection	In general situation, respiratory protection is not needed. If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.
Skin and body protection	In general situation, skin and body protection are not needed.

9 Physical and chemical properties

| Physical and chemical properties

BLUE liquid
mild odor
No information available
7~9
Less than 32°F / 0°C
Greater than 212°F / 100°C
Greater than 230°F / 110°C
No information available
Not combustible
Upper limit: Not explosive; Lower limit: Not explosive
No information available
Greater than 1
No information available
Miscible
No information available



Particle characteristics Not applicable

10 Stability and reactivity

Incompatible materials

Hazardous decomposition products Under normal condition should not be produced.

11 Toxicological information

Acute toxicity

,				
Component	Cas No.	LD ₅₀ (oral)	LD₅₀(dermal)	LC ₅₀ (inhalation,4h)
Dioctyl adipate	103-23-1	9100mg/kg(Rat)	No information available	No information available
Ethanol	64-17-5	7060mg/kg(Rat)	No information available	39mg/L(Mouse)

Carcinogenicity

	•			
ID	Cas No.	Component	IARC	NTP
1	103-23-1	Dioctyl adipate	Category 3	Not Listed
2	1345-16-0	Pigment Blue	Category 2B	Not Listed
3	63148-65-2	Polyvinyl Butyral	Not Listed	Not Listed
4	64-17-5	Ethanol	Category 1	Not Listed
5	7732-18-5	Water	Not Listed	Not Listed

Others

Dry-Erase Marker (blue)		
Skin corrosion/irritation	Based on available data, the classification criteria are not met	
Serious eye damage/irritation	Based on available data, the classification criteria are not met	
Skin sensitization	Based on available data, the classification criteria are not met	
Respiratory sensitization	Based on available data, the classification criteria are not met	
Reproductive toxicity	Based on available data, the classification criteria are not met	
STOT-single exposure	Based on available data, the classification criteria are not met	



STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Reproductive toxicity(additional)	Based on available data, the classification criteria are not met

12 Ecological information

Acute aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
Dioctyl adipate	103-23-1	LC ₅₀ : >50mg/L	EC ₅₀ : >0.0032mg/L	ErC ₅₀ : >50mg/L
Diociyi adipate	103-23-1	(96h)(Fish)	(48h)(Crustaceans)	(72h)(Algae)
Ethanol	64-17-5	LC ₅₀ : 11000mg/L	EC ₅₀ : 9950mg/L	No information
Luano	04-17-5	(96h)(Fish)	(48h)(Crustaceans)	available

| Chronic aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
Dioctyl adipate	102.22.1	No information	NOEC: 0.0032mg/L	NOEC: 50mg/L
Dioctyl adipate	103-23-1	available	(Crustaceans)	(Algae)

Persistence and degradability

Component Cas No. Dioctyl adipate 103-23-1		Persistence (water/soil)	Persistence (air) Low(Half-life = 1.08 days)		
		Low(Half-life = 56 days)			
Ethanol	64-17-5	Low(Half-life = 2.17 days)	Low(Half-life = 5.08 days)		
Water	7732-18-5	Low	Low		

| Bioaccumulative potential

Component	Cas No.	Bioaccumulative potential	comments	
Dioctyl adipate	103-23-1	High	BCF=2700	
Ethanol	64-17-5	Low	Log Kow=-0.31	
Water	7732-18-5	Low	Log Kow=-1.38	

| Mobility in soil

Component	Cas No.	Mobility in soil	Soil Organic Carbon-Water Partitioning Coefficient (Koc)		
Dioctyl adipate	103-23-1	Low	48630		
Ethanol	64-17-5	High	1		
Water	7732-18-5	Low	14.3		

Results of PBT and vPvB assessment

Component	Cas No.	Results of PBT and vPvB assessment
Component	Cas No.	(according to (EC) No 1907/2006)



	Dioctyl adipate	103-23-1	not PBT/vPvB
	Pigment Blue	1345-16-0	not PBT/vPvB
	Polyvinyl Butyral	63148-65-2	not PBT/vPvB
Ethanol		64-17-5	not PBT/vPvB
	Water	7732-18-5	not PBT/vPvB

13 Disposal considerations

Disposal considerations

Disposar sonsiderations	
Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation.
vvaste Chemicais	Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and
Containinated packaging	ignition source of fire. Return to supplier for recycling if possible.
Disposal	Refer to section waste chemicals and contaminated packaging.
recommendations	Refer to section waste chemicals and contaminated packaging.

14 Transport information

Label and Mark

Transporting Label Not applicable

IMDG-CODE

IMDG-CODE | NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

ICAO/IATA-DGR

ICAO/IATA-DGR NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

UN-ADR

UN-ADR NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

15 Regulatory information

International chemical inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS	ENCS
Dioctyl adipate	√	√	√	√	√	√	√	√	√
Pigment Blue	√	√	√	√	√	√	√	√	×
Polyvinyl Butyral	×	√	√	√	√	√	√	√	√
Ethanol	√	√	√	√	√	√	√	√	√
Water	√	√	√	√	√	√	√	√	√

【EINECS】 European Inventory of Existing Commercial Chemical Substances

【TSCA】 United States Toxic Substances Control Act Inventory

【DSL】 Canadian Domestic Substances List

【IECSC】 China Inventory of Existing Chemical Substances



【NZIoC】 New Zealand Inventory of Chemicals

【PICCS】 Philippines Inventory of Chemicals and Chemical Substances

[KECI] Existing and Evaluated Chemical Substances
 [AICS] Australia Inventory of Chemical Substances
 [ENCS] Existing And New Chemical Substances

Note

" $\sqrt{}$ " Indicates that the substance included in the regulations

"x" That no data or included in the regulations

16 Others

I Information on revision

I milorimation on revision	
Creation Date	2020/05/15
Revision Date	2020/05/15
Reason for revision	-

Reference

[1]IPCS: The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home.

[2]IARC, website: http://www.iarc.fr/.

[3]OECD: The Global Portal to Information on Chemical Substances, website:

http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en.

[4]CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple.

[5]NLM: ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp.

[6]EPA: Integrated Risk Information System, website: http://cfpub.epa.gov/iris/.

[7]U.S. Department of Transportation: ERG, website: http://www.phmsa.dot.gov/hazmat/library/erg.

[8]Germany GESTIS-database on hazard substance, website: http://gestis-en.itrust.de/.

Abbreviations and acronyms

NFPA-National Fire Protection Association

CAS –Chemical Abstracts Service	CMR - Carcinogens, mutagens or substances toxic to reproduction
PC-STEL- Short term exposure limit	PC-TWA - Time Weighted Average
DNEL - Derived No Effect Level	IARC - International Agency for Research on Cancer
RPE - Respiratory Protective Equipment	PNEC –Predicted No Effect Concentration
LC ₅₀ - Lethal Concentration 50%	LD ₅₀ - Lethal Dose 50%
NOEC -No Observed Effect Concentration	EC ₅₀ - Effective Concentration 50%
PBT - Persistent, Bioaccumulative, Toxic	POW - Partition coefficient Octanol: Water
BCF - Bioconcentration factor (BCF)	vPvB - very Persistent, very Bioaccumulative
IMDG-International Maritime Dangerous Goods	ICAO/IATA-International Civil Aviation Organization/International Air
	Transportation Association
UN -The United Nations	ACGIH-American Conference of Governmental Industrial Hygienists

Disclaimer

This Safety Data Sheet (SDS) was prepared according to UN GHS (the 8th revised edition). The data included was

OECD-Organization for Economic Co-operation and Development



derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product. The information of section 3 and section 9 is provided by the company listd in section 1. Other information is from authoritative database and expert assessment.

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