

SAFETY DATA SHEET

according to the Globally Harmonized System and US regulation

DRY-FLO TS

Version 1

Revision Date 11/15/2017

Print Date 08/05/2019

US / Z8

1. IDENTIFICATION

Product name : DRY-FLO TS

Product Use Description : Specific use(s): Cosmetic additive

Company : Nouryon Surface Chemistry LLC
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US

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2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	powder
Color	off-white
Odor	characteristic
Hazard Summary	Risk of dust explosion.

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]
Starch	9005-25-8		>= 70 - < 90

4. FIRST AID MEASURES

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

Inhalation : Remove to fresh air.
Keep patient warm and at rest.
Rinse nose and mouth with water.

Skin contact : Remove contaminated clothing and shoes.
Rinse with water.

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

Ingestion : Clean mouth with water and drink afterwards plenty of water.
Never give anything by mouth to an unconscious person.

Notes to physician

Symptoms : The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.

Risks : No information available.

Treatment : Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards during fire fighting / Specific hazards arising from the chemical : Treat as oil fire.
Risks of ignition followed by flame propagation or secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges.

Combustion products : No hazardous combustion products are known

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Standard procedure for chemical fires.

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- Personal precautions : Avoid dust formation.
- Emergency measures on accidental release : Follow safe handling advice and personal protective equipment recommendations.
- Environmental precautions : No special environmental precautions required.
- Methods for cleaning up / Methods for containment : Sweep up and shovel.
Keep in suitable, closed containers for disposal.
- Reference to other sections : For disposal considerations see section 13.
For personal protection see section 8.

7. HANDLING AND STORAGE

Handling

- Advice on safe handling : For personal protection see section 8.
Avoid creating dust.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
No special handling advice required.
- Advice on protection against fire and explosion : Provide appropriate exhaust ventilation at places where dust is formed.
No sparking tools should be used.

Storage

- Requirements for storage areas and containers : Store in original container.
Keep in a dry place.
Store between 40-77°F (5-25°C).
Keep container tightly closed.
- Advice on common storage : No special restrictions on storage with other products.
- Other data : No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value	Control parameters	Update	Basis	Form of exposure
Starch	9005-25-8	TWA	10 mg/m3	2007-01-01	ACGIH	
	Further information	:	dermatitis: Dermatitis A4: Not classifiable as a human carcinogen			
		TWA	5 mg/m3	2013-10-08	NIOSH REL	Respirable

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		TWA	10 mg/m3	2013-10-08	NIOSH REL	total
		TWA	15 mg/m3	2007-01-01	OSHA Z-1	total dust
		TWA	5 mg/m3	2007-01-01	OSHA Z-1	respirable fraction
		TWA	15 mg/m3	1989-01-19	OSHA P0	Total dust
		TWA	5 mg/m3	1989-01-19	OSHA P0	respirable dust fraction
		PEL	10 mg/m3	2014-11-26	CAL PEL	Total dust
		PEL	5 mg/m3	2014-11-26	CAL PEL	respirable dust fraction
	Further information	:	(n): The concentration and percentage of the particulate used for this limit are determined from the fraction passing a size selector with the following characteristics: Aerodynamic Diameter in Micrometers (unit density sphere)..... Percent Passing Selector 0 100 1 97 2 91 3 74 4 50 5 30 6 17 7 9 8 5 10 1			
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/m3	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/m3	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.

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Personal protective equipment

Eye/face protection	: Safety glasses
Hand protection	: Glove material: For prolonged or repeated contact use protective gloves. : Glove material: Protective gloves complying with EN 374.
Respiratory protection	: No personal respiratory protective equipment normally required. In the case of dust, vapor or aerosol formation use respirator with an approved filter. Half mask with a particle filter P2 (EN 143)
Hygiene measures	: General industrial hygiene practice.

Environmental exposure controls

General advice	: No special environmental precautions required.
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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	: powder
Color	: off-white
Odor	: characteristic
Odor Threshold	: No data available

Safety data

pH	: 5 - 7.5 at 20 % solution
Melting point/range	: No data available
Boiling point/boiling range	: Not applicable
Flash point	: Not applicable
Evaporation rate	: Not applicable
Flammability (solid, gas)	: Not applicable
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
Relative density	: No data available
Water solubility	: slightly soluble

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Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: Not applicable
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

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	: None known.
Materials to avoid	: None known.
Hazardous decomposition products	: No hazardous decomposition products are known.
Thermal decomposition	: No data available
Reactivity	: Stable under normal conditions.
Chemical stability	: Stable under recommended storage conditions.
Hazardous reactions	: Dust may form explosive mixture in air.

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.
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.

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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 : Product dust may be irritating to eyes.

Ingestion : Not expected to be irritating.

Aggravated Medical Condition : None known.

Symptoms of Overexposure : The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.

Toxicology Assessment

Further information : No further data available.

Test result

Acute oral toxicity : LD50: Species: Rat
No data available

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: Starch

Acute oral toxicity : LD50: > 5,000 mg/kg
Species: Rat
Literature data.

12. ECOLOGICAL INFORMATION

PRODUCT INFORMATION:

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Ecotoxicology Assessment

Additional ecological information : None known.

Test result

Ecotoxicity effects

Toxicity to daphnia and other aquatic invertebrates : EC50: > 100 mg/l
Exposure time: 48 h
Species: Daphnia magna (Water flea)

Toxicity to algae : EC50: > 100 mg/l
Exposure time: 72 h
Species: Pseudokirchneriella subcapitata (green algae)

Elimination information (persistence and degradability)

Bioaccumulation : No data available

Mobility : No data available

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301B

Further information on ecology

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).

INGREDIENTS:

Test result

Component: Starch

Ecotoxicity effects

Toxicity to fish : LC50: Exposure time: 96 h
Species: Fish
No data available

Elimination information (persistence and degradability)

Bioaccumulation : Bioaccumulation is unlikely.

Mobility : No data available

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Biodegradability : Result: No data available

Further information on ecology

Biochemical Oxygen : No data available
Demand (BOD)

13. DISPOSAL CONSIDERATIONS

Product : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Contaminated packaging : Empty remaining contents.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

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.

Further information for transport

Not classified as dangerous in the meaning of transport regulations.

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 : YES. On the inventory, or in compliance with the inventory

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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 : YES. On the inventory, or 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.

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

This material does not contain any components with a CERCLA RQ.

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

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals subject to disclosure and listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM/ Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

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

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

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CAL PEL	:	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA P0	:	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	:	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA	:	8-hour, time-weighted average
CAL PEL / PEL	:	Permissible exposure limit
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
OSHA P0 / TWA	:	8-hour time weighted average
OSHA Z-1 / 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: 1
		Flammability: 1
		Physical hazards: 0

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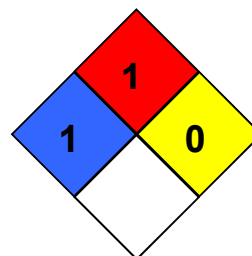
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NFPA Classification

: Health Hazard: 1
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

Further information

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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.