MATERIAL SAFETY DATA SHEET **DAWN ORANGE ACETAL 2**

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 33587 Walker Road, Avon Lake, OH 44012

Telephone:Emergency telephone:	Product Stewardship (440) 930-1395 CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).
Product name :	DAWN ORANGE ACETAL 2
Product code :	CC10106573
Chemical Name :	Mixture
CAS-No. :	Mixture
Product Use :	Industrial Applications

2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS

Components	CAS-No.	Weight %
Titanium dioxide	13463-67-7	0.1 - 1
Calcium stearate	1592-23-0	1 - 5

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This mixture has not been evaluated as a whole. Information provided on the health effects of this product is based on individual components. All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating and the end-user (fabricator) must take the necessary precautions (mechanical ventilation, respiratory protection, etc.) to protect employees from exposure.

POTENTIAL HEALTH EFFECTS

Routes of Exposure:	osure: : Inhalation, Ingestion, Skin contact		
Acute exposure			
Inhalation	: Particulates, like other inert materials can be mechanically irritating. If overheated or burnt, the polymer releases formaldehyde.		
Ingestion	: May be harmful if swallowed.		
Eyes	: Particulates, like other inert materials can be mechanically irritating.		
Skin	: Experience shows no unusual dermatitis hazard from routine handling.		
Chronic exposure	: Refer to Section 11 for Toxicological Information.		
Medical Conditions Aggravated by Exposure:	: None known.		

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	4. FIRST AID MEASURES
Inhalation	: Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. When symptoms persist or in all cases of doubt seek medical advice.
Ingestion	: Do not induce vomiting without medical advice. When symptoms persist or in all cases of doubt seek medical advice.
Eyes	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, seek medical attention.
Skin	: Wash off with soap and plenty of water. If skin irritation persists seel medical attention.
	5. FIRE-FIGHTING MEASURES
Flash point	: Not applicable
Flammable Limits Upper explosion limit Lower explosion limit Autoignition temperature Suitable extinguishing media Special Fire Fighting Procedures Unusual Fire/Explosion Hazards	 Not applicable Not applicable Not applicable Carbon dioxide blanket, Water spray, Dry powder, Foam. Fullface self-contained breathing apparatus (SCBA) used in positive pressure mode should be worn to prevent inhalation of airborne contaminants. Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), other hazardous materials, and smoke are all possible. If overheated or burnt, the polymer releases formaldehyde. May burn with invisible flame.
	6. ACCIDENTAL RELEASE MEASURES
Personal precautions	: Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls.
Environmental precautions	: Should not be released into the environment. The product should not be allowed to enter drains, water courses or the soil.
Methods for cleaning up	: Clean up promptly by sweeping or vacuum. Package all material in plastic, cardboard or metal containers for disposal. Refer to Section 12 of this MSDS for proper disposal methods.
	7. HANDLING AND STORAGE
Handling	: Take measures to prevent the build up of electrostatic charge. Open container only in a well-ventilated area. Heat only in areas with

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Storage	:	appropriate exhaust ventilation. Keep containers dry and tightly closed to avoid moisture absorption and contamination. Keep in a dry, cool place.
8. EXPOS	UK	E CONTROLS / PERSONAL PROTECTION
Respiratory protection	:	No personal respiratory protective equipment normally required. When temperatures exceed 230°C (446°F) and ventilation is inadequate to maintain concentrations below exposure limits, use a positive air supplied respirator. Air purifying respirators may not provide adequate protection.
Eye/Face Protection	:	Safety glasses with side-shields Wear face-shield and protective suit for abnormal processing problems.
Hand protection	:	Protective gloves
Skin and body protection	:	Long sleeved clothing
Additional Protective Measures	:	Safety shoes
General Hygiene Considerations	:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Engineering measures	:	Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at machinery.

Exposure limit(s)

Components	Value	Exposure time	Exposure type	List:
Calcium stearate	10 mg/m3	Time Weighted Average		ACGIH
		(TWA):		
Titanium dioxide	10 mg/m3	Time Weighted Average		ACGIH
		(TWA):		
	15 mg/m3	PEL:	Total dust.	OSHA Z1
	10 mg/m3	Time Weighted Average	as Ti	MX OEL
		(TWA):		
	20 mg/m3	Short Term Exposure Limit	as Ti	MX OEL
		(STEL):		

9. PHYSICAL AND CHEMICAL PROPERTIES

- Form Appearance Color Odour Melting point/range
- : Solid
 : pellets, Slabs
 : ORANGE
 : formaldehyde
 : Not determined
- Evaporation rate Specific Gravity Bulk density Vapour pressure Vapour density
- Not applicableNot determinedNot establishedNot applicableNot applicable

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Water solubility			
	10. STABILITY AND	D REACTIVITY	
Stability	: Stable.		
Hazardous Polymerization	: Will not occur.		
Conditions to avoid			230°C (446°F). Avoid prolonged occessing temperature.
Incompatible Materials	(decomposes to form resins are incompat (PVC) and any elas processing conditio involve rapid degra can cause sudden an Workplace fume we pressurization of eq Thoroughly purge a avoid even trace qu	m formaldehyde). <i>A</i> ible with halogenar tomers containing ns, these materials dation. Even small nd spontaneous for ell above threshold uipment such as ex and mechanically c antities of halogen	d with strong acids and bases At melt temperatures, acetal ted polymers such as vinyl any halogenated polymers. At are mutually destructive and amounts of such contaminants maldehyde gas formation. levels are a likely result. Unsafe struder or mold can also result. lean processing equipment to ated materials from coming in nination of virgin or rework
Hazardous decomposition products	(NOx), other hazard overheated or burnt Decomposition of the exposed to elevated temperature of 210° not be significant up	lous materials, and t, the polymer relea his material depend temperatures. At t °C-220°C (410°F-4 ntil after 30 minute	ide (CO), oxides of nitrogen smoke are all possible. If uses formaldehyde. ds on the lenght of time it is the recommended processing 428°F), decomposition should es. Decomposition may be as and/or other additives.

This mixture has not been evaluated as a whole for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Toxicity Overview

This product contains the following components which in their pure form have the following characteristics:

CAS-No.	Chemical Name	Effect	Target Organ
13463-67-7	Titanium dioxide	Systemic effects	Respiratory system.

LC50 / LD50

This product contains the following components which, in their pure form, have the following toxicity data:

CAS-No.	Chemical Name	Route	Value	Species

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1592-23-0Calcium stearateOral LD50> 10 gm/kgrat			
	Calcium stearate	> 10 gm/kg	rat

Carcinogenicity

This product contains the following components which, in their pure form, have the following carcinogenicity data:

CAS-No.	Chemical Name	OSHA	IARC	NTP
13463-67-7	Titanium dioxide	no	2B	no

IARC Carcinogen Classifications:

1 - The component is carcinogenic to humans.

2A - The component is probably carcinogenic to humans.

2B - The component is possibly carcinogenic to humans.

NTP Carcinogen Classifications:

1 - The component is known to be a human carcinogen.

2 - The component is reasonably anticipated to be a human carcinogen.

12. ECOLOGICAL INFORMATION

Persistence and degradability	: Not readily biodegradable.
Environmental Toxicity	: Chemicals are not readily available as they are bound within the polymer matrix.
Bioaccumulation Potential	: Chemicals are not readily available as they are bound within the polymer matrix.
Additional advice	: Not applicable
	13. DISPOSAL CONSIDERATIONS
Product	: Like most thermoplastic plastics the product can be recycled. Where possible recycling is preferred to disposal or incineration. The generator of waste material has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations.
Contaminated packaging	: Recycling is preferred when possible. The generator of waste materia has the responsibility for proper waste classification, transportation and disposal in accordance with applicable federal, state/provincial and local regulations.
	14. TRANSPORT INFORMATION
U.S. DOT Classification	: Not regulated for transportation.
U.S. DOT Classification	· · · · · · · · · · · · · · · · · · ·

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		15	S. REGULATORY INFORMATION
US Reg	gulations:		
	OSHA Status	:	Classified as hazardous based on components.
	TSCA Status	:	All components of this product are listed on or exempt from the TSCA Inventory.
US. EP	PA CERCLA Hazardous S	Sub	stances (40 CFR 302)
	Not applicable		
	California Proposition 65	:	Not applicable
SARA	Title III Section 302 Extra	rem	ely Hazardous Substance
Unless		lenti	fied under this section, this product is Not Applicable under this regulat
Unless SARA	specific chemicals are id Title III Section 313 Tox	lenti	fied under this section, this product is Not Applicable under this regulat
Unless SARA Unless	specific chemicals are id Title III Section 313 Tox	lenti	fied under this section, this product is Not Applicable under this regulat
Unless SARA Unless Canadia	specific chemicals are id Title III Section 313 Tox specific chemicals are id	lenti cic C	fied under this section, this product is Not Applicable under this regulat Chemicals: fied under this section, this product is Not Applicable under this regulat
Unless SARA Unless Canadi	specific chemicals are id Title III Section 313 Tox specific chemicals are id ian Regulations: National Pollutant Releas	lenti cic C	fied under this section, this product is Not Applicable under this regulat Chemicals: fied under this section, this product is Not Applicable under this regulat
Unless SARA Unless Canadi	specific chemicals are id Title III Section 313 Tox specific chemicals are id ian Regulations:	lenti cic C	fied under this section, this product is Not Applicable under this regulat Chemicals: fied under this section, this product is Not Applicable under this regulat
Unless SARA Unless Canadia Not	specific chemicals are id Title III Section 313 Tox specific chemicals are id ian Regulations: National Pollutant Releas t applicable	lenti tic (lenti se Ii	fied under this section, this product is Not Applicable under this regulat Chemicals: fied under this section, this product is Not Applicable under this regulat nventory (NPRI)
Unless SARA Unless Canadi Not	specific chemicals are id Title III Section 313 Tox specific chemicals are id ian Regulations: National Pollutant Releas t applicable WHMIS Classification	lenti cic (lenti se Ii :	fied under this section, this product is Not Applicable under this regulat Chemicals: fied under this section, this product is Not Applicable under this regulat nventory (NPRI) D2A All components of this product are on the Canadian Domestic
Unless SARA Unless Canadi Not	specific chemicals are id Title III Section 313 Tox specific chemicals are id ian Regulations: National Pollutant Releas t applicable WHMIS Classification DSL	lenti cic (lenti se Ii :	fied under this section, this product is Not Applicable under this regulat Chemicals: fied under this section, this product is Not Applicable under this regulat nventory (NPRI) D2A All components of this product are on the Canadian Domestic
Unless SARA Unless Canadia Not	specific chemicals are id Title III Section 313 Tox specific chemicals are id ian Regulations: National Pollutant Releas t applicable WHMIS Classification DSL al Inventories:	lenti cic (lenti se Ii :	fied under this section, this product is Not Applicable under this regulat Chemicals: fied under this section, this product is Not Applicable under this regulat nventory (NPRI) D2A All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.

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Japan ENCS	: Not determined	
Korea KECI	: Listed	
Philippines PICCS	: Listed	

16. OTHER INFORMATION

The information provided in this 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.