MATERIAL SAFETY DATA SHEET **DV2-81A GLOW IN THE DARK**

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1. PRODUCT AND COMPANY IDENTIFICATION

POLYONE CORPORATION 8155 Cobb Center Drive, Kennesaw, GA 30152

Telephone Emergency telephone	:	Product Stewardship (770) 590-3500 x.3563 CHEMTREC 1-800-424-9300 (24hrs for spill, leak, fire, exposure or accident).
Product name	:	DV2-81A GLOW IN THE DARK
Product code	:	FO20017184
Chemical Name	:	Mixture
CAS-No.	:	Mixture
Product Use	:	Industrial Applications

2. COMPOSITION/INFORMATION ON REGULATED INGREDIENTS

Components	CAS-No.	Weight %
Quartz	14808-60-7	0.1 - 1
Calcium carbonate	1317-65-3	30 - 60

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

This mixture has not been evaluated as a whole for health effects. Information provided on health effects of this product is based on the individual components. However, some vapors or contaminants 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. See sections 8 and 11 for special precautions.

POTENTIAL HEALTH EFFECTS

Routes of Exposure:	: Inhalation, Skin contact, Ingestion		
Acute exposure			
Inhalation	: Inhalation of airborne droplets may cause irritation of the respiratory tract.		
Ingestion	: May be harmful if swallowed.		
Eyes	: May cause eye/skin irritation.		
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 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 see medical attention.
	5. FIRE-FIGHTING MEASURES
Flash point	: No data available
Flammable Limits Upper explosion limit Lower explosion limit Autoignition temperature Suitable extinguishing media Special Fire Fighting Procedures Unusual Fire/Explosion Hazards	 No data available No data available 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. May emit Hydrogen Chloride (HCl) or Carbon Monoxide (CO) under fire conditions. Carbon dioxide (CO2), carbon monoxide (CO), oxide of nitrogen (NOx), other hazardous materials, and smoke are all possible.
1	6. ACCIDENTAL RELEASE MEASURES
Personal precautions	: Wear appropriate personal protection during cleanup, such as impervious gloves, boots and coveralls.
Environmental precautions	: The product should not be allowed to enter drains, water courses or the soil. Should not be released into the environment.
Methods for cleaning up	: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder universal binder, sawdust). Package all material in appropriate container for disposal. Refer to Section 13 of this MSDS for proper disposal methods.
	7. HANDLING AND STORAGE
Handling	: Heat only in areas with appropriate exhaust ventilation. Processing

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Storage

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fume condensates may contain combustible or toxic residue. Periodically clean hoods, ducts, and other surfaces to minimize accumulation of these materials. Keep containers dry and tightly closed to avoid moisture absorption : and contamination. Store in a cool dry place. 8. EXPOSURE CONTROLS / PERSONAL PROTECTION Respiratory protection No personal respiratory protective equipment normally required. : Eye/Face Protection : Safety glasses with side-shields Hand protection Protective gloves · Skin and body protection : Long sleeved clothing

Additional Protective Safety shoes : Measures

General Hygiene Handle in accordance with good industrial hygiene and safety practice. : Considerations 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 carbonate	5 mg/m3	PEL:	Respirable fraction.	OSHA Z1
	15 mg/m3	PEL:	Total dust.	OSHA Z1
	10 mg/m3	Time Weighted Average		MX OEL
		(TWA):		
	20 mg/m3	Short Term Exposure Limit		MX OEL
		(STEL):		
Quartz	0.025	Time Weighted Average	Respirable fraction.	ACGIH
	mg/m3	(TWA):		
	0.1 mg/m3	Time Weighted Average	Respirable.	Z3
		(TWA):		
	0.3 mg/m3	Time Weighted Average	Total dust.	Z3
		(TWA):		
	0.1 mg/m3	Time Weighted Average		MX OEL
		(TWA):		

9. PHYSICAL AND CHEMICAL PROPERTIES

Form Appearance Color

: liquid : Viscous, liquid : NOT APPLICABLE Evaporation rate Specific Gravity Bulk density

: Not established Not determined : Not applicable :

Vapour pressure

Keep away from oxidizing agents and open flame. To avoid thermal

Incompatible with strong acids and oxidizing agents., Avoid contact

with acetal homopolymers and acetal copolymers during processing.

Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen

(NOx), hydrogen chloride (HCl), other hazardous materials, and

Vapour density

pН

Not determined : Not determined : Not applicable

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Melting point/range

Hazardous Polymerization

Conditions to avoid

Incompatible Materials

Hazardous decomposition

Boiling Point:

Water solubility

Odour

Stability

products

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: Very faint

: Immiscible

: Not applicable

: Not applicable

Stable.

Will not occur.

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smoke are all possible. Prolonged heating may result in product degradation. As a general rule of thumb, degradation begins to occur after one hour at 177 °C (350 °F), after 10 minutes at 204 °C (400 °F), and within 5 minutes at 232 °C (450 °F).

10. STABILITY AND REACTIVITY

decomposition, do not overheat.

11. TOXICOLOGICAL INFORMATION

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
14808-60-7	Quartz	Systemic effects	Eyes, Respiratory system.
1317-65-3	Calcium carbonate	Irritant	Eyes, Skin.
		Systemic effects	Eyes, Skin, Respiratory system.

Carcinogenicity

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

CAS-No.	Chemical Name	OSHA	IARC	NTP
14808-60-7	Quartz	no	1	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:



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

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

Additional Health Hazard Information:

Quartz 14808-60-7 This material in its free releasable form may cause respiratory tract irritation. Long-term exposure may cause coughing, chest pain, diminished chest expansion and possibly silicosis, which is a scarring of the lungs.

	12. ECOLOGICAL INFORMATION
Persistence and degradability	: Not readily biodegradable.
Environmental Toxicity	: Environmental toxicity has not been established for this mixture as a whole.
Bioaccumulation Potential	: No data available
Additional advice	: No data available
	13. DISPOSAL CONSIDERATIONS
Product	: Where possible recycling is preferred to disposal or incineration. Th 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	: Refer to specific regulation.
ICAO/IATA (air)	: Refer to specific regulation.
IMO / IMDG (maritime)	: Refer to specific regulation.
	15. REGULATORY INFORMATION
US Regulations:	
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. EPA CERCLA Hazardous	Substances (40 CFR 302)

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Not applicable

California Proposition:WARNING! This product contains a chemical known to the State of
California to cause cancer.

SARA Title III Section 302 Extremely Hazardous Substance

Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation

SARA Title III Section 313 Toxic Chemicals:

Unless specific chemicals are identified under this section, this product is Not Applicable under this regulation

Chemical Name	CAS-No.	Weight %
COPPER COMPOUNDS (WITH EXCEPTIONS)ZINC	68611-70-1	1.00 - 5.00
COMPOUNDS		

Canadian Regulations:

National Pollutant Release Inventory (NPRI)

Chemical Name	CAS-No.	Weight %	NPRI ID#
Zinc sulfide (ZnS), copper chloride-doped	68611-70-1	1.00 - 5.00	71
		1.00 - 5.00	231

WHMIS Classification : D2A

WHMIS Ingredient Disclosure List

CAS-No.	
68611-70-1	
68611-70-1	

DSL

All components of this product are on the Canadian Domestic Substances List (DSL) or are exempt.

National Inventories:

Australia AICS	:	Not determined
China IECS	:	Not determined
Europe EINECS	:	Not determined

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Japan ENCS	: Not determined
Korea KECI	: Not determined

Philippines PICCS : Not determined

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.