

U.S. DEPARTMENT OF LABOR

Form No. LSH-005-4
May 1969

WAGE AND LABOR STANDARDS ADMINISTRATION Bureau of Labor Standards

MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER'S NAME PPG Industries, Inc.		EMERGENCY TELEPHONE NO. (216) 753-4561
ADDRESS (Number, Street, City, State, and ZIP Code) One Gateway Center, Pittsburgh, Pa. 15222		
CHEMICAL NAME AND SYNONYMS di-normal propyl peroxydicarbonate (Normal propyl percarbonate)		TRADE NAME AND SYNONYMS NPP
CHEMICAL FAMILY Organic Peroxide	FORMULA $C_8H_{14}O_6$	

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST	100	Not Listed	ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

BOILING POINT (°F.)	Decomposes on heating	SPECIFIC GRAVITY ($H_2O=1$)	1.1161
VAPOR PRESSURE (mm Hg.)	NA	PERCENT VOLATILE BY VOLUME (%)	NA
VAPOR DENSITY (AIR=1)	NA	EVAPORATION RATE (_____ = 1)	NA
SOLUBILITY IN WATER	Negligible		
APPEARANCE AND ODOR	Clear liquid, disagreeable odor		

FLASH POINT (Method used)	NA	FLAMMABLE LIMITS	LeI	UeI
EXTINGUISHING MEDIA	Generates own oxygen, difficult to extinguish.			
SPECIAL FIRE FIGHTING PROCEDURES	Protect surrounding areas by cooling with water.			
	Let fire run its course.			
UNUSUAL FIRE AND EXPLOSION HAZARDS	Undergoes autoaccelerative decomposition and may self ignite on decomposition. Confinement may lead to a detonation.			

SL 074537

THRESHOLD LIMIT VALUE	Not established
EFFECTS OF OVEREXPOSURE	Inhalation overexposure is not likely. NPP is extremely irritating to the skin and eyes.
EMERGENCY AND FIRST AID PROCEDURES	Provide adequate ventilation. In case of contact, immediately flush eyes with water for 15 minutes. Call a physician. Flush skin with large amounts of water.

STABILITY	UNSTABLE	X	CONDITIONS TO AVOID	Keep refrigerated at all times.
	STABLE			Avoid cross contamination.
INCOMPATIBILITY (Materials to avoid)		Accelerators, amines, caustic, acids		
HAZARDOUS DECOMPOSITION PRODUCTS		Most all decomposition products are flammable.		
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID	Excess concentration in monomer may
	WILL NOT OCCUR	X		cause rapid polymerizations.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
Flush small amounts with large quantities of water. Absorb on inert material, remove to safe area and scatter on ground.	
WASTE DISPOSAL METHOD	
Scatter on ground in open area free of combustibles and ignition sources. Allow to decompose.	

RESPIRATORY PROTECTION (Specify type)			Provide ventilation.
VENTILATION	LOCAL EXHAUST	Provide adequate ventilation.	
	MECHANICAL (General)		
PROTECTIVE GLOVES		Rubber gloves	EYE PROTECTION
OTHER PROTECTIVE EQUIPMENT		Splash goggles	

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
Store at 0°F or below. See manufacturer's literature for description of storage precautions.	
OTHER PRECAUTIONS	

U.S. DEPARTMENT OF LABOR

WAGE AND LABOR STANDARDS ADMINISTRATION
Bureau of Labor Standards

MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER'S NAME PPG		EMERGENCY TELEPHONE NO. (216) 753-4561
ADDRESS (Number, Street, City, State, and ZIP Code)		
CHEMICAL NAME AND SYNONYMS 85% Di-n-propyl peroxydicarbonate in MCH		TRADE NAME AND SYNONYMS 85% NPP
CHEMICAL FAMILY Organic Peroxide	FORMULA $C_8H_{14}O_6$	

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
di-n-propyl peroxydicarbonate				85	NA
methyl cyclohexane (ppm)				15	500

BOILING POINT (°F.)	Decomposes on heating	SPECIFIC GRAVITY (H ₂ O=1)	1.052
VAPOR PRESSURE (mm Hg.)	NA	PERCENT VOLATILE BY VOLUME (%) (decomposes)	NA
VAPOR DENSITY (AIR=1)	NA	EVAPORATION RATE (_____ = 1)	NA
SOLUBILITY IN WATER	Negligible		
APPEARANCE AND ODOR	clear liquid		

FLASH POINT (Method used) 7°C (OPPSD Micro Test on 75% NPP)	FLAMMABLE LIMITS Methyl cyclohexane	LeI 1.2	UeI
EXTINGUISHING MEDIA			
SPECIAL FIRE FIGHTING PROCEDURES Don't fight a peroxydicarbonate fire. It will burn out quickly. Limit fire by water spray from a safe distance.			
UNUSUAL FIRE AND EXPLOSION HAZARDS Thermal decomposition releases gases which spray flammable liquid and vapor into the air where they mix with oxygen and burn very vigorously.			

HOLD LIMIT VALUE

established: solvent methyl cyclohexane TLV=500 ppm, NPP has very low vapor pressure
EFFECTS OF OVEREXPOSURE LD₅₀=4.6 g/kg, non-toxic. Extremely irritating to the eye.

Extremely irritating to the skin. Solvent causes narcosis.

EMERGENCY AND FIRST AID PROCEDURES

Skin contact: flush with water, clean with soap and water and then with alcohol.

Eye contact: flush with water for at least 15 minutes, call a physician

Swallowing: do not induce vomiting, consult a physician immediately

STABILITY

UNSTABLE

X

CONDITIONS TO AVOID

Refrigerate at -18°C (0°F)

STABLE

Contamination

INCOMPATIBILITY (Materials to avoid)

Accelerators, amines, acids, alkaline materials

HAZARDOUS DECOMPOSITION PRODUCTS

Some decomposition products flammable

**HAZARDOUS
POLYMERIZATION**

MAY OCCUR

WILL NOT OCCUR

CONDITIONS TO AVOID

Contact with

X

polymerizable materials (monomers)

Product is a polymerization initiator

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Small spill: Flood with water and wash up with soap and water.

Alternate method: Cover with sand and clean up. Spread solid with adsorbed peroxide in a safe disposal area immediately.

WASTE DISPOSAL METHOD

Small quantities: Add waste continuously to 5% alcoholic potassium hydroxide.

Alternate Procedure: Scatter material on ground in a well ventilated disposal area and allow to decompose gradually.

RESPIRATORY PROTECTION (Specify type)

Protect against mists and vapors

VENTILATION

LOCAL EXHAUST

Provide adequate ventilation

MECHANICAL (General)

SPECIAL

OTHER

PROTECTIVE GLOVES

Rubber, PVC

EYE PROTECTION

Splash Goggles

OTHER PROTECTIVE EQUIPMENT

Rubber Gloves, Plastic Aprons

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store at -18°C (0°F) or below. Check storage

temperatures at least once a shift. See manufacturer's literature.

OTHER PRECAUTIONS

Auxiliary refrigeration can be provided by dry ice placed above the peroxydicarbonate.