

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 75% Di-sec-butyl Peroxydicarbonate in OMS		TRADE NAME AND SYNONYMS 75% SBP
CHEMICAL FAMILY Organic Peroxide, Solution	FORMULA $C_{10}H_{18}O_6$ (pure SBP)	

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-sec-butyl peroxydicarbonate				75	NA
odorless mineral spirits (ppm)				25	500

BOILING POINT (°F.) decomposes on heating	SPECIFIC GRAVITY ($H_2O=1$) 0.971
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, unpleasant	

FLASH POINT (Method used) 51°C (OPPSD Micro)	FLAMMABLE LIMITS OMS	LoI 0.8	UpI 5
EXTINGUISHING MEDIA water			
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 liquids and vapors into the air where they mix with oxygen and burn very vigorously.			

SL 074549

THRESHOLD LIMIT VALUE Not established: solvent OMS TLV = 500 ppm, SBP has very low vapor pressure.

EFFECTS OF OVEREXPOSURE
 LD₅₀ = 9.3 g/kg, non-toxic. Moderately 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		CONDITIONS TO AVOID Contact with polymerizable materials
	WILL NOT OCCUR	X	(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 cautiously 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	SPECIAL
	MECHANICAL (General)	OTHER
PROTECTIVE GLOVES	Rubber, PVC	EYE PROTECTION
OTHER PROTECTIVE EQUIPMENT		Splash Goggles
Rubber shoes, 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 peroxy-dicarbonate.

U.S. DEPARTMENT OF LABOR

WAGE AND LABOR STANDARDS ADMINISTRATION
Bureau of Labor Standards

Form No. LSH-005-4
May 1969

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 50% Di-sec-butyl Peroxydicarbonate in Toluene	TRADE NAME AND SYNONYMS 50% SBP	
CHEMICAL FAMILY Organic Peroxide	FORMULA $C_{10}H_{18}O_8$ (pure SBP)	

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-sec-butyl peroxydicarbonate				50	NA
toluene (ppm)				50	200

BOILING POINT (°F.)	decomposes on heating	SPECIFIC GRAVITY ($M_2O=1$)	0.951
VAPOR PRESSURE (mm Hg.)	NA	PERCENT VOLATILE BY VOLUME (%)	-
VAPOR DENSITY (AIR=1)	NA	EVAPORATION RATE ($M_2O=1$)	-
SOLUBILITY IN WATER	negligible		
APPEARANCE AND ODOR	clear liquid, toluene odor		

FLASH POINT (Method used) 51°C (75% SBP, OPPSD Micro)	FLAMMABLE LIMITS Toluene	LeI 1.2	Uel 7.1
EXTINGUISHING MEDIA water			
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 liquids and vapors into the air where they mix with oxygen and burn very vigorously.			

THRESHOLD LIMIT VALUE	Not established: solvent, toluene TLV = 200 ppm; SBP has very low vapor pressure
EFFECTS OF OVEREXPOSURE	Not established. Product is expected to be moderately irritating to eyes and extremely irritating to the skin. Solvent is an irritant.
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 -7°C (20°F)
	STABLE		Contamination
INCOMPATIBILITY (Materials to avoid) accelerators, amines, acids, alkaline materials			
HAZARDOUS DECOMPOSITION PRODUCTS Some decomposition products flammable			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID Contact with polymerizable materials
	WILL NOT OCCUR	X	(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 cautiously 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	SPECIAL
	MECHANICAL (General)	OTHER
PROTECTIVE GLOVES	Rubber, PVC	EYE PROTECTION Splash Goggles
OTHER PROTECTIVE EQUIPMENT Rubber shoes, plastic aprons		

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
Store at -7°C (20°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 peroxy-dicarbonate. Emergency refrigeration can be provided by direct contact with wet ice	

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME

PPG Industries

ADDRESS (Number, Street, City, State, and ZIP Code)

EMERGENCY TELEPHONE NO.

(216) 753-4561

CHEMICAL NAME AND SYNONYMS

30% Di-Sec-Butyl Peroxydicarbonate in xylene

TRADE NAME AND SYNONYMS

30% SBP in xylene

CHEMICAL FAMILY

Organic Peroxide

FORMULA

C₁₀H₁₈O₆ (pure SBP)

SECTION II - HAZARDOUS INGREDIENTS

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)
D-sec-butyl peroxydicarbonate				30	NA
M-xylene (PPM)				70	100

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	decomposes on heating	SPECIFIC GRAVITY (H ₂ O=1)	0.930
VAPOR PRESSURE (mm Hg)	(xylene, 29°C) 10	PERCENT VOLATILE BY VOLUME (%)	70
VAPOR DENSITY (AIR=1)	No Data	EVAPORATION RATE (_____ =1)	Decomposes NA
SOLUBILITY IN WATER	negligible		
APPEARANCE AND ODOR	clear liquid, xylene odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	87°F (Seta-Flash Close Cup)	FLAMMABLE LIMITS	LFL	UFL
			1.1%	7.0%
EXTINGUISHING MEDIA	Water			
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 liquid and vapor into the air where they mix with oxygen and burn very vigorously.			

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

Not established; solvent, xylene TLV=100 PPM; SBP has very low vapor pressure

EFFECTS OF OVEREXPOSURE

Acute Toxicity - Oral LD₅₀ = 6.8 g/kg Dermal LD₅₀ = 3.0 g/kg practically non-toxic. Moderately irritating to the skin. Mildly irritating to the eye. Sol-

EMERGENCY AND FIRST AID PROCEDURES vent produces narcosis.

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 physician.

Swallowing: Do not induce vomiting, consult a physician immediately.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE	X	CONDITIONS TO AVOID Refrigerate at 0° C (32° F)
	STABLE		Contamination
INCOMPATIBILITY (Materials to avoid)			
accelerators, amines, acids, alkaline materials			
HAZARDOUS DECOMPOSITION PRODUCTS			
Some decomposition products flammable			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID Contact with polymerizable materials
	WILL NOT OCCUR	X	(monomers)
Product is a polymerization initiator.			

SECTION VII - SPILL OR LEAK PROCEDURES

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 absorbed peroxide in a safe disposal area immediately.	
WASTE DISPOSAL METHOD	
Small Quantities: Add waste cautiously to 5% alcoholic potassium hydroxide.	
Alternate Procedure: Scatter material on ground in a well ventilated disposal area and allow to decompose gradually.	

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)		
Protect against mists and vapors		
VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (General)	OTHER
PROTECTIVE GLOVES		EYE PROTECTION
Rubber, PVC		Splash Goggles
OTHER PROTECTIVE EQUIPMENT		
Rubber shoes, plastic aprons		

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
Store at 0° C (32° 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 peroxy-dicarbonate. Emergency refrigeration can be provided by direct contact with wet ice.	

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

June, 1978

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-sec-butyl Peroxydicarbonate		TRADE NAME AND SYNONYMS SBP
CHEMICAL FAMILY Organic Peroxide	FORMULA C₁₀H₁₈O₆	

SECTION II - HAZARDOUS INGREDIENTS

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-sec-butyl peroxydicarbonate				100	N/A

SECTION III - PHYSICAL DATA

BOILING POINT (°F. decomposes on heating)		SPECIFIC GRAVITY (H ₂ O=1)	1.067
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%)	100
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____=1)	nil
SOLUBILITY IN WATER	negligible		
APPEARANCE AND ODOR	Clear liquid, unpleasant odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	118°F (SETA flash)	FLAMMABLE LIMITS	LFL	UFL
EXTINGUISHING MEDIA	Water - difficult to extinguish			
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 liquids and vapors into air where they mix with oxygen and burn very vigorously.			

SECTION V - HEALTH HAZARD DATA	
THRESHOLD LIMIT VALUE	Not established by OSHA
EFFECTS OF OVEREXPOSURE	LD ₅₀ 7.6 g/kg, non-toxic (PPG)*. Moderately irritating to the eye. Extremely irritating to skin.
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.

SECTION VI - REACTIVITY DATA			
STABILITY	UNSTABLE	X	CONDITIONS TO AVOID Thermally unstable-refrigerate at -18°C (0°F)
	STABLE		
INCOMPATIBILITY (Materials to avoid) Avoid contamination with accelerators, amines, acids, alkaline materials			
HAZARDOUS DECOMPOSITION PRODUCTS Some decomposition products flammable			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID Contact with polymerizable materials (monomers)
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Provide ventilation. Absorb on vermiculite or sand--carefully sweep into open metal container for disposal. Wash area with soap and water.	
WASTE DISPOSAL METHOD Small quantities: Carefully scatter material on ground in a well ventilated disposal area and allow to decompose gradually.	

SECTION VIII - SPECIAL PROTECTION INFORMATION		
RESPIRATORY PROTECTION (Specify type)		
VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (General) Provide adequate ventilation	OTHER
PROTECTIVE GLOVES	Rubber, PVC	EYE PROTECTION Splash goggles
OTHER PROTECTIVE EQUIPMENT Rubber shoes, plastic aprons, eye wash fountain		

SECTION IX - SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Store at or below -180°C (0°F). To preserve assay. Wear protective gloves when handling. Keep container covered with original closure. Protect from sunlight and other sources of heat. Auxiliary refrigeration can be provided by placing dry ice above the peroxycarbonate.	
OTHER PRECAUTIONS Check storage temperature at least once a shift. See manufacturer's literature.	