



Material Safety Data Sheet

Last Revision: 05/03/2007

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: PERKACIT® DPG
MSDS NO. FLXP0006
Chemical Name: N,N'-Diphenylguanidine.
Synonyms: 1,3-Diphenylguanidine; Diphenylguanidine; DPG; DPG Accelerator.
Use: Accelerator.
Manufactured By: Flexsys America L.P. 260 Springside Drive Akron OH 44333-2433 USA

Emergency Telephone: CHEMTREC: 1-800-424-9300 [TOLL FREE - USA and Territories]
703-527-3887 [ELSEWHERE - Collect Calls Accepted]
CANUTEC: 613-996-6666 [Canada]
SETIQ: 91-800-00-214 [Mexico]

Prepared By: Flexsys America Product Safety: Phone (330) 668-8281 FAX (330) 668-8345
E:mail sharen.b.breyer@flexsys.com

2. HAZARDS IDENTIFICATION

Emergency Overview: WARNING! Harmful if swallowed. Causes eye irritation. May irritate the skin. Causes respiratory irritation. May cause allergic skin reaction.

Eye Contact: Causes eye irritation. Moderate Eye Irritation: signs/symptoms can include redness, swelling, pain, tearing and hazy vision.

Skin Contact: Causes mild skin irritation. Causes drying of the skin. May cause a rash and itching of the skin. May cause an allergic skin reaction.

Inhalation: Causes moderate respiratory irritation. Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

Ingestion: Harmful if swallowed. May cause pain, nausea, vomiting and diarrhea. Illness may occur after a single swallowing of relatively large quantities of this material.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
N,N'-Diphenylguanidine	102-06-7	96 - 99
1,3,5-Triphenylbiguanidine (Impurity)	None	< 2
Branched Alkylphenol Ethoxylate [-grs-3mm form ONLY]	68412-54-4	1 - 2
White Mineral Oil [-pdr-d form ONLY]	8042-47-5	1 - 2

4. FIRST AID MEASURES

In Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

On Skin: Remove contaminated clothing. Wash skin with water, using soap if available. Remove contaminated clothing and launder before reuse. Get medical attention if irritation persists.

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DISTRIBUTION CORPORATION**
60 S. Seiberling Street • Akron, Ohio 44305

4. FIRST AID MEASURES

Inhaled:	Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.
Swallowed:	If swallowed, give at least 3-4 glasses of water, but do not induce vomiting. Do not give anything by mouth to an unconscious or convulsing person. Get medical attention.
Notes To Physician:	No specific antidote. Treatment should be directed at preventing absorption, administering to symptoms as they occur, and providing supportive therapy.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C):	315°F / 157°C
Flash Point Method:	Closed Cup (CC)
Autoignition Temp. (°F/C):	Not Determined
Lower Explosion Limit (LEL):	Not Determined
Upper Explosion Limit (UEL):	Not Determined.
Extinguishing Media:	Use water fog, carbon dioxide, foam or dry chemical.
Special Exposure Hazards:	Combustible. Fight fire from a safe distance and from a protected location. Use water spray to cool fire exposed surfaces. Decomposition in fire may produce toxic gases. Do not allow runoff to enter waterways.
Special Protective Equipment:	Fire fighters should wear full impervious protective clothing, including self-contained breathing equipment.
Unusual Fire/Explosion Hazards:	Dust explosion data: Pmax = 67 psi Rmax = 4400 psi/sec Dust Class = ST-1 Minimum Ignition Energy [MIE] = 13 mJ. Toxic emissions may result if product is involved in a fire.

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures:	Wear protective equipment specified. Avoid the generation of dust. Sweep, vacuum, or shovel and place into closable container for disposal.
Procedure for Cleaning/Absorption:	Isolate spill and stop leak where safe. Scoop up and remove solids. Do NOT spread spilled product with water.
CERCLA Reportable Quantity (RQ):	Not Applicable

7. HANDLING AND STORAGE

Handling:	Good hygienic practices should be observed. Work clothes should be washed separately at the end of each work day. Disposable clothing should be discarded with material. Avoid generating or breathing dust. Avoid contact with eyes, skin and clothing. Reclose containers of unused product. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Do not reuse this container.
Storage:	Store closed containers in a cool, dry, well-ventilated area. Store away from strong oxidizing materials. Avoid exposure to direct sunlight. Do not double stack.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye Protection:	Wear safety glasses or goggles to protect against exposure. Wear eye protection appropriate to handling activities.
Skin Protection:	Normal work coveralls. Launder contaminated clothing before reuse.
Gloves:	Use gloves as a standard industrial handling procedure. All cleanable impervious glove types are acceptable.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection:	Appropriate respiratory protection shall be worn when applied engineering controls are not adequate to protect against inhalation exposure. Firefighting: Use a Positive Pressure Demand Full Face Self Contained Breathing Apparatus.
Ventilation:	General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits during the use of this product. If air is to be recirculated, it must be filtered properly.
Airborne Exposure Limits:	Nuisance Dust. OSHA PEL/8Hr-TWA = 15 mg/m ³ (Total Dust). OSHA PEL/8-Hr TWA = 05 mg/m ³ (Respirable Dust). ACGIH TLV/8-Hr TWA = 10 mg/m ³ . White Mineral Oil OSHA PEL/8-Hr TWA = 5mg/m ³ ACGIH TLV/8-Hr TWA = 5mg/m ³ .

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off-white powder. White to off-white granules.
Odor:	AROMATIC
pH:	Not Applicable.
Specific Gravity:	1.2 @ 25°C
Density:	1.15
Bulk Density:	1180 kg/m ³ @20°C
Melting Point (°F/C):	144-150°C
Boiling Point (°F/C):	Decomposes above 170°C
Vapor Pressure:	Negligible
Vapor Density (Air=1):	Not Applicable.
% Volatile by Volume:	<0.3% by heat loss
Solubility in Water:	INSOLUBLE; <0.1g/100 ml @ 21°C
Other Solubility:	Soluble in: Acetone Ethanol Acids Chloroform Benzene Toluene
Viscosity:	Not Applicable.
Other Data:	Ash content = 0.4% max
Molecular Weight:	211.26
Molecular Formula:	C13-H13-N3

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable when stored at room temperature in closed, original container. Stable under normal conditions of handling, use and transportation.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	Keep away from heat, sparks and flame. Temperatures above 160°C. Avoid contact with strong oxidants such as liquid chlorine and concentrated oxygen.
Materials to Avoid:	Contact with oxidizing agents.
Hazardous Decomposition Products:	Carbon monoxide. Oxides of nitrogen.
Additional Guidelines:	Not Applicable

11. TOXICOLOGICAL INFORMATION

Acute Oral LD50 (mg/kg):	350 - 507 mg/kg (Rat)
Acute Dermal LD50 (mg/kg):	>2000 mg/kg (Rabbit)
Acute Inhalation LC50 (mg/l):	Not Determined

Target Organs / Principle Routes of Exposure: Liver. Blood. Skin. Inhalation. Dermal - skin.

Ingestion:	Harmful if swallowed. May cause pain, nausea, vomiting and diarrhea. Illness may occur after a single swallowing of relatively large quantities of this material.
Skin Contact:	Causes mild skin irritation. Causes drying of the skin. May cause a rash and itching of the skin. May cause an allergic skin reaction.

11. TOXICOLOGICAL INFORMATION

Inhalation:	Causes moderate respiratory irritation. Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.
Eye Contact:	Causes eye irritation. Moderate Eye Irritation: signs/symptoms can include redness, swelling, pain, tearing and hazy vision.
Aggravated Conditions:	Pulmonary disorders. Dermal ailments. Eye, skin, respiratory, blood, liver and/or kidney ailments. This material or its emissions may cause an allergic or sensitization reaction and thereby aggravate systemic disease.
Carcinogenicity Comment:	This product, or one of its ingredients present at 0.1% or more, is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC or OSHA.
Other Information:	Decomposition products and fumes from vulcanization and cross-linking may cause eye, skin and respiratory sensitization. May be a skin sensitizer.
Primary Irritation Effect:	Moderately irritating to eyes. Slightly irritating to skin. Probable skin sensitizer.
Carcinogenicity:	Negative in standard tests using bacteria and/or yeast cells.
Genotoxicity:	Both negative and weak positive results in standard in vitro and in vivo tests using mammalian cells.
Reproductive/Developmental Toxicity:	Chronic animal studies have shown this material to cause reproductive effects, blood effects and organ weight changes.

12. ECOLOGICAL INFORMATION

Acute Fish Toxicity:	96Hr LC50 Rainbow Trout = 11.0 mg/l. 96Hr LC50 Bluegill Sunfish = 9.6 mg/l. 96Hr LC50 Fathead Minnow = 4.2 mg/l.
Acute Crustaceans Toxicity:	48Hr EC50 Daphnia Magna = 17.0 mg/l
Acute Algae Toxicity:	96Hr EC50 Algae = 1.7 mg/l.
Octanol/Water Coefficient:	1.69 log P.
Chemical Fate Information:	Biodegradability: >90% in <2 weeks. Phototransformation: T(1/2) =>95 days.
Other Information:	Tests indicate this material will not bioaccumulate or persist in the environment.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method:	This material is not a RCRA hazardous waste. Bury in a licensed landfill or burn in an approved incinerator according to federal, state, and local regulations. Empty containers should be handled in a manner not to cause dusting during collection, transportation and disposal.
Contaminated Packaging:	If empty container retains product residues, all label precautions must be observed. Store away from ignition sources. Transport with all closures in place. Return for reuse or dispose according to national or local regulations. Dispose of container according to national or local regulations.

14. TRANSPORT INFORMATION

DOT:	UN 3077, Environmentally Hazardous Substance, Solid, N.O.S., (N,N'-Diphenylguanidine), 9, III
DOT Reportable Quantity (lbs):	None
ICAO/IATA:	See DOT
IMDG:	See DOT
Marine Pollutant:	No
TDG (Canada):	See DOT

Remarks: NOTE: NEW shipping description effective May 21, 2007.

15. REGULATORY INFORMATION

Worldwide Inventory Status

USA (TSCA): Listed

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15. REGULATORY INFORMATION

Canada (DSL):	Listed
Canada (NDSL):	Not Applicable. Listed on the DSL.
European Union (EINECS/ELINCS):	Listed
Japan (ENCS):	Listed
Korea (ECL):	Listed
Australia (AICS):	Listed
New Zealand (NZ):	Listed
Phillipines (PICCS):	Listed
China (CLECS):	Listed.

US Regulatory Rules

SARA Section 302:	None Found
SARA 311/312 Hazard Categories:	Immediate Delayed
SARA 313 Chemical:	Not Applicable / None
RCRA Status:	Not a RCRA waste.

Other Regulations:

California Proposition 65:	NONE
New Jersey Right-to-Know List:	Not Applicable.
Pennsylvania Right to Know List:	Not Applicable.
Florida Right to Know:	Not Applicable.
Minnesota Right to Know:	Not Applicable.
Massachusetts Right to Know Law:	Not Applicable.

FDA Status 21 CFR:	Regulated for Use under the following sections of 21 CFR: 177.2600 Rubber Articles Intended for Repeated Use in Food Contact.
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Canadian Regulations

WHMIS Hazard Class:	D-1B: MATERIALS CAUSING IMMEDIATE AND SERIOUS TOXIC EFFECTS (TOXIC) D2B TOXIC MATERIALS / Materials Causing Other Toxic Effects
NPRI:	Component Branched Alkylphenol Ethoxylate: NPRI Part 1, Group 1, ID# 178. Minimum concentration 1%.

16. OTHER INFORMATION

Hazard Rating Systems:

HMIS Classification:	HEALTH 2, FLAMMABILITY 1, REACTIVITY 0
NFPA Rating:	HEALTH 2, FLAMMABILITY 1, REACTIVITY 0

The following has been revised since the last issue of this MSDS: New MSDS format. Transport information or classification has been changed/corrected.

Additional Information:	IMPORTANT INFORMATION ON ADDITIVES: White Mineral Oil is present in the dedusted powder product form [Perkacit DPG-pdr-d] ONLY. Branched Alkylphenol Ethoxylate is present in the 3mm granules product form [Perkacit DPG-grs-3mm] ONLY. There are NO additives in Perkacit DPG-pdr. Component Branched Alkylphenol Ethoxylate: CEPA Schedule 1 Toxic Substances. [CANADA]
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Important Note: This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

*****END OF MSDS*****