

# Safety Data Sheet

In accordance with the Hazard Communication Standard (HCS)(29 CFR 1910.1200(g))

**SECTION 1.  
IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY**

**1.1. Substance identifier**

Substance name	<b>DPX-C</b>
Other names (if available)	Dichlorotricyclo[8.2.2.24,7]hexadeca-1(12),4,6,10,13,15-hexaene, mixed isomers
Synonyms	Chloro-p-xylylene cyclic dimer; Dichlorodi-1,4-xylylene; Dichlorotricyclo(8.2.2.2(sup 4,7))hexadeca-4,6,10,12,13,15-hexaene
Name in Annex VI-CLP	Not present in Anex VI-CLP
Name reported in the inventory of harmonized classification and labelling	Substance not listed
CAS number	28804-46-8
IUPAC name (if CAS is not available)	Tricyclo[8.2.2.24,7]hexadeca-4,6,10,12,13,15-hexaene, dichloro
REACH Pre-registration number	05-2114128520-62-0000
REACH registration number	Not assigned

**1.2. Relevant identified uses of the substance and uses advised against**

Relevant use(s)	Parylene Intermediate
Uses advised against	There are no other uses

**1.3. Details of the supplier of the safety data sheet**

Manufacturer/Distributor/Importer	Company name: Specialty Coating Systems, Inc. Address: 7645 Woodland Drive, Indianapolis, IN 46278 Phone number : 317-244-1200 Fax number: 317-240-2739
Competent person responsible for the safety data sheet	Dr. Rakesh Kumar Specialty Coating Systems Address: 7645 Woodland Drive, Indianapolis, IN 46278 Phone number : 317-472-1266 e-mail: rkumar@scscoatings.com

**1.4. Emergency telephone number**

Location	Company name: Chemtrec Phone number: 001-703-527-3887; International 001-703-527-3887 (24 hours per day, 7 days per week)
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**SECTION 2.  
HAZARDS IDENTIFICATION**

**2.1 Classification of the substance**

**Classification of the substance in accordance with the Hazard Communication Standard (HCS)(29 CFR 1910.1200(g)).**

Hazard class	Class code and hazard category	Hazard statement	Hazard warning
Not classified as dangerous	Not provided	Not provided	Not provided

**Classification in accordance with the Hazard Communication Standard (HCS)(29 CFR 1910.1200(g)).**

Classification	Hazard symbol	Risk phrases
Not classified as dangerous	Not provided	Not provided

Main adverse effects	
<i>Physical-chemical effects</i>	There are no known physical / chemical effects due to this substance
<i>Health effects</i>	Ingestion: may be harmful if swallowed
	Inhalation: may be harmful if inhaled
	Skin Contact: may be irritating
	Eye contact: may be irritating
	Sensitization: No data found in the literature search carried out
<i>Environmental effects</i>	There are no known environmental hazards

See also sections from 9 to 12

**2.2 Label elements**

**Labelling in accordance with the Hazard Communication Standard (HCS)(29 CFR 1910.1200(g)).**

Pictogram	Not provided
Warning	Not provided
Hazard indication (H) <sup>[1]</sup>	Not provided
Safety statements (P) <sup>[1]</sup>	Not provided

<sup>[1]</sup> For the explanation of H and P statements: see Section 16

**2.3 Other hazards (which do not results in the classification)**

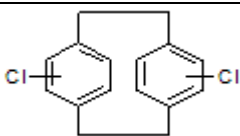
The substance satisfies the PBT criteria	YES	NO
PBT		X
vPvB		X

Health hazards	Ingestion: heartburn and abdominal pain
	Inhalation: irritation of the mucous membranes of the upper airway
	Skin: redness of the skin
	Contact with eyes: a burning sensation and redness of the conjunctiva
Environmental hazards	There are no known environmental hazards
Physical-chemical hazards	Unusual fire and explosion hazards: This substance may generate fine dust particles. As with all fine, dry dusts, it is advisable to ground equipment that comes in contact with the substance in order to dissipate the potential of static electricity and possible combustion. No smoking. The substance emits toxic fumes under fire.

Specific effects	There are no known specific effects attributable to this substance
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**SECTION 3.  
COMPOSITION/INFORMATION ON INGREDIENTS**

**Description**

<i>Name of the component</i>	DPX-C
<i>Concentration</i>	≥92%
<i>Structural formula</i>	
<i>Chemical formula</i>	C <sub>16</sub> H <sub>14</sub> Cl <sub>2</sub>
<i>Molecular weight</i>	277.12 [g/mol]
<i>Substance with Community OEL</i>	NO
<i>CAS name</i>	Tricyclo[8.2.2.2(sup 4,7)]hexadeca-4,6,10,12,13,15-hexaene, dichloro
<i>CAS number</i>	28804-46-8
<i>IUPAC name</i>	Tricyclo[8.2.2.2(sup 4,7)]hexadeca-4,6,10,12,13,15-hexaene, dichloro
<i>EC number</i>	249-236-8
<i>Index number</i>	Not available in the literature search carried out
<i>Impurity/ies (if classified)</i>	There are no harmful impurities
<i>Additive/s (if classified)</i>	There are no additives

**SECTION 4.  
FIRST AID MEASURES**

**4.1 Description of the first aid measures**

<i>Eye contact</i>	Wash thoroughly with water or saline. Keep the eyelids open during flushing.
<i>Skin contact</i>	Remove the contaminated clothing. Wash the body with soap or mild detergent and rinse with water until the substance is completely removed (15-20 minutes).
<i>Ingestion</i>	If swallowed: rinse mouth thoroughly with water
<i>Inhalation</i>	Avoid breathing dust that might otherwise arise from handling the product. Move to fresh air in a well ventilated area.

**4.2 Most important symptoms and effects (acute and delayed)**

<i>Acute effects</i>	Ingestion: heartburn and abdominal pain
	Inhalation: irritation of the mucous membranes of the upper airway
	Skin: redness of the skin
	Contact with eyes: a burning sensation and redness of the conjunctiva
<i>Delayed effects</i>	There are no symptoms and delayed effects attributable to this substance

**4.3 Indication of any immediate medical attention and special treatment needed**

<i>Medical monitoring</i>	Not required based on the classification of the substance
<i>Antidotes, if known</i>	There are no known antidotes
<i>Contraindications</i>	There are no known contraindications.
<i>Immediate treatment at workplace</i>	Not Required

**SECTION 5.  
FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

<i>Suitable extinguishing media</i>	Water spray, dry chemical, foam, carbon dioxide
<i>Unsuitable extinguishing media</i>	There are no known unsuitable means of extinguishing

**5.2 Special hazards arising from the mixture**

<i>Hazardous combustion products</i>	Thermal decomposition or burning may result in the liberation of toxic fumes that include but are not limited to hazardous CO, CO <sub>2</sub> , and HCl
<i>Other special hazards</i>	There are no known special hazards on this substance

**5.3 Advice for firefighters**

<i>Technical actions for protection</i>	Do not attempt to extinguish the fire without the use of a self-contained breathing apparatus and suitable protective clothing
<i>Special protective equipment for firefighters</i>	Wear boots, gloves, eye and face protection. Respirators: Use the devices shown in the best conditions of care based on information reported in the previous subsections.

**SECTION 6.  
ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel	
<i>Eyes</i>	Wear appropriate protective equipment (see Section 8)
<i>Skin</i>	Wear full protective clothing with the body
<i>Airway</i>	In case of fire and explosion avoid breathing fumes and vapors. Use a self-contained breathing apparatus and suitable protective clothing. The fumes can be eliminated by spraying with water.

For emergency responders	
<i>Eyes</i>	see Section 8
<i>Skin</i>	see Section 8
<i>Airway</i>	see Section 8

**6.2 Environmental precautions**

In case of accidental release or leakage, prevent the substance from reaching a discharge that may reach surface water or groundwater. Inform respective authorities in case of environmental pollution.

**6.3 Methods and material for containment and cleaning up**

<i>Containment procedures</i>	Collect all the material spilled on the ground with appropriate protective equipment and put it in a clean container
<i>Cleaning up procedures</i>	In the event of a smaller spill, recover the substance by suction or other mechanical means and wash the area with plenty of water and detergents. Avoid generation of dust. Proper protective equipment should be used. In the event of a large spill, clear the affected area, protect people and respond with trained

	personnel. Minimum personal protective equipment should be triple gloves, chemically resistant suit and boots, and air purifying respirator with high efficiency particulate filter. Self-contained breathing apparatuses must be selected if releases occur in confined or poorly-ventilated areas, or if the level of oxygen is below 19.5%. Sweep up or vacuum spilled solid. Rinse area with soap and water solution, followed by a water rinse. Place all spill residues in an appropriate container and seal. Dispose of in accordance with local waste disposal regulations.
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**6.4 Reference to other sections**

See also section 8 and 13

**SECTION 7.  
HANDLING AND STORAGE**

**7.1. Precautions for safe handling**

<i>Recommendation for handling</i>	-Keep away from sources of ignition -Handle in well-ventilated place -Avoid contact with materials / substances thatn are incompatible -Wear appropriate Personal Protective Equipment (see section 8) -Keep the substance away from the water discharge
<i>Recommendation for personal hygiene</i>	-Do not eat, drink or smoke in work areas -Wash hands after use -Remove contaminated clothing and PPE before entering areas where you eat

**7.2. Condition for safe storage including any incompatibilities**

The method for managing risk in this section depends on the classification resulting from the properties outlined in Section 9. Because this substance is not classified for certain physical and chemical properties, their management methods are not known.

Risk Management measures related to	
<i>Potential ignition sources</i>	Do not expose to heat

Procedure to control other effects	
<i>Weather conditions</i>	Store the original container in a cool, dry place
<i>Ambient pressure</i>	Does not provide for any mode of containment
<i>Temperature</i>	Store at a temperature of <30 ° C
<i>Sunlight</i>	Do not expose to direct sunlight
<i>Humidity</i>	Store in ambient conditions
<i>Vibration</i>	Does not provide for any mode of containment

The application of the rules for risk management committed to the physical and chemical properties is to be made on the basis of risk assessments carried out by the employer in its employment practices (use of the substance).

Material to keep the integrity of the mixture	
<i>Stabilizers</i>	Not used
<i>Antioxidants</i>	Not used

Other advice	
<i>Ventilation requirements</i>	Request based on the storage of the substance
<i>Specific design of storage rooms</i>	Not required according to classification

<i>Quantity limits for storage</i>	Not required according to classification
<i>Packaging compatibilities</i>	Fiberboard drum with anti-static bag or other chemically inert containers

**7.3. Specific end use(s)**

Recommendation for specific final use(s)
Parylene Intermediate

**SECTION 8.  
EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1. Control parameters**

Occupational Exposure Limits	Not present in searchable databases
Other Occupational Exposure Limits	Not present in searchable databases
Biological Limits (BEI)	Not present in searchable databases
Other Biological Limits (BEI)	Not present in searchable databases
OSHA ACGIH TLV	Not present in searchable databases
Other Relevant Occupational Exposure Limits	TLV-TWA PNOC Inhalable: 10 mg/m

**8.2. Exposure controls**

8.2.1. Appropriate engineering controls

The choice of appropriate techniques and controls to be carried out according to risk assessments carried out by the employer in its employment practices (use of the substance) in the absence of a unique exhibition and standardized scenario described in the REACH registration dossier

8.2.2. Individual protection measures, such as Personal Protective Equipment (PPE)

a) Eye and Face protection	Safety glasses according to OSHA 29 CFR 1910.133
b) Skin protection	
<i>hands protection</i>	-Chemical resistant gloves according to OSHA 29 CFR 1910.138 -The glove material has to be impermeable and resistant to the product / substance. -Material: Nitrile rubber (nitrile), hypoallergenic -Thickness: not less than 0.12 mm
<i>other, body protection</i>	The protection must be chosen depending on activity and exposure. For example: apron, boots and clothing suitable in the event of spillage or in a chemical emergency.
c) Respiratory protection	Where the risk assessment shows the need for air-purifying respirators, use only respiratory protection authorized in U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134) or equivalent U.S. State Standards. Use respirators and components tested and approved under appropriate government standards such as NIOSH (U.S.) or CEN (EU). The powder is divided into three categories: the second (inert powder with TLV of 10 mg/m <sup>3</sup> ), 2b (0.1 to 10 mg/m <sup>3</sup> TLV with harmful substances (except asbestos)), 2c (toxic substances with TLV <0, 1 mg/m <sup>3</sup> (asbestos, carcinogenic, spores, bacteria, viruses, proteolytic enzymes). Cat. 2a: P1 filter, Cat 2b: P2 filter, Cat.2c: filter P3.
d) Thermal hazards	Not specified in the standard practice of using the substance. Identify any personal protective equipment based on specific conditions of

	usage.
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**SECTION 9.  
PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

Appearance	Form: Powder      Color: White to off-white
Odor	Odorless
Odor threshold	Not available
pH	Not available
Melting point/freezing point	166-175°C <sup>[1]</sup>
Initial boiling point and boiling range	Not available in the literature search carried out
Flash point	Not available
Flammability (solid, gas)	Not available
Upper/lower flammability or explosive limits	Not available
Vapor pressure	Not available
Vapor density	1.34 g/cm <sup>3</sup> [1]
Relative density	Not available in the literature search carried out
Solubility	Insoluble
Partition coefficient:n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Sublimation temperature/start	160°C

**SECTION 10.  
STABILITY AND REACTIVITY**

**10.1. Reactivity**

The substance is not considered reactive under normal conditions of use

**10.2. Chemical stability**

The substance is stable at ambient temperature and pressure if stored in closed containers in a well ventilated place.

	NO	YES	Used stabilizer
Stabilizers	X		
Change in physical appearance	X		

**10.3. Possibility of hazardous reactions**

	NO	YES
Possibility of an exothermic reaction	X	
Possibility of a reaction releasing excessive pressure	X	
Possible degradation with unstable product formation	X	

**10.4. Condition to avoid**

Avoid exposure to UV light and excessive heat

**10.5. Incompatible materials**

Strong oxidizing agents, strong acids, strong bases

**10.6. Hazardous decomposition products**

Thermal decomposition or burning may result in the liberation of toxic fumes including, but not limited to CO, CO<sub>2</sub>, and HCl

**SECTION 11.  
INFORMATION ON TOXICOLOGICAL EFFECTS**

<b>Exposure routes</b>	<b>YES</b>	<b>NO</b>
<i>Inhalation</i>	X	
<i>Ingestion</i>	X	
<i>Skin contact</i>	X	
<i>Eye contact</i>	X	

<b>Effects (acute, delayed, chronic) following the exposure (short and/or prolonged)</b>	
<i>Inhalation</i>	Irritation of the mucosa of the upper airway
<i>Ingestion</i>	Heartburn and abdominal pain
<i>Skin contact</i>	Redness of the skin
<i>Eye contact</i>	Burning sensation and redness of the conjunctiva

<b>Toxico-kinetics information (ADME = Adsorption, Distribution, Metabolism, Excretion)</b>	Not available in the literature search carried out
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<b>Acute toxicity effects</b>	
<i>Oral</i>	DL50 oral rat: 6500 mg/kg <sup>[1]</sup>
<i>Dermal</i>	LD50 Dermal Rabbit:> 16000 mg / kg <sup>[1]</sup>
<i>Inhalation</i>	Not available in the literature search carried out
<i>Other effects</i>	Not available in the literature search carried out

<b>Corrosion/Irritation effects</b>	Not available in the literature search carried out
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<b>Severe ocular lesion</b>	There are no serious injuries
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<b>Sensitization</b>	
<i>Dermal</i>	Not available in the literature search carried out
<i>Respiratory</i>	Not available in the literature search carried out

<b>Repeated dose toxicity (experimental.)</b>	Not available in the literature search carried out
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<b>CMR effects</b>	
Germinal cell mutagenicity	Not available in the literature search carried out
Carcinogenicity	Not available in the literature search carried out
Reproductive toxicity	Not available in the literature search carried out



<b>Specific Target Organ Toxicity (STOT)-single exposure</b>	Not available in the literature search carried out
<b>Specific Target Organ Toxicity (STOT)- repeated exposure</b>	Not available in the literature search carried out
<b>Aspiration hazards</b>	Not available in the literature search carried out
<b>Epidemiological information</b>	Not available in the literature search carried out
<b>Reasons for the lack of classification</b>	Where the substance is not classified, this is due to the presence of data that does not involve the application of the classification for that effect, or the lack of data, or the presence of information/data inconclusive or insufficient for classification according to the criteria used in the regulations mentioned in this safety data sheet. There are no serious injuries known for this product.

**SECTION 12  
ECOLOGICAL INFORMATION**

**12.1. Toxicity**

Not available in the literature search carried out

**12.2. Persistence and degradability**

Not available in the literature search carried out

**12.3. Bioaccumulative potential**

Not available in the literature search carried out

**12.4. Mobility in soil**

Not available in the literature search carried out

**12.5. Results of PBT & vPvB assessment**

Based on the available information does not satisfy the criteria to be considered a PBT or vPvB.

**12.6. Other adverse effects**

Not available in the literature search carried out

**SECTION 13.  
DISPOSAL CONSIDERATION**

The excess material and debris should be handled in compliance with safety and any personal protective equipment listed under items 7 and 8. Waste Disposal must be in accordance with appropriate local regulations.

**13.1. Waste treatment methods**

	Incineration	Recycling	Landfilling
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Mixture wastes	X		
Contaminated packaging			X

**SECTION 14.  
TRANSPORT INFORMATION**

<b>ONU Number:</b>	/
<b>UN proper shipping name:</b>	DPX-C
<b>ADR</b>	<b>RID</b>
<b>Pictogram</b>	<b>Pictogram</b>
Class, Code, Group: /	Class, Code, Group: /
Label: /	Label: /
Hazard identification number: /	Hazard identification number: /
LQ: /	LQ: /
Tunnel Restriction code: /	
<b>IMDG</b>	<b>IATA</b>
Class: /	Class: /
Packaging group: /	Packaging group: /
EmS sheet n. :	Erg code: /
Marine Pollutant:	
<b>Special precaution for users</b>	
Not classified for transport in accordance with the rules RID / ADR, IMDG, ICAO / IATA	

<b>Transport in bulk according to Annex II of Marpol 73/78 and the IBC code, if applicable</b>
Not applicable.

**SECTION 15.  
REGULATORY INFORMATION**

In this section, all other information on regulation is reported if not provided in other sections/subsection of the Safety Data Sheet

**15.1 Safety, Health and Environmental regulation/legislation specific for the mixture or its ingredients**

Council Directive 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work (Official Journal L 183 , 29/06/1989 P. 0001 – 0008) and following amendment and National reinforcements..

Council Directive 89/686/EEC of 21 December 1989 on the approximation of the laws of the Member States relating to the personal protective equipment.

Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC) Official Journal L 131 , 05/05/1998 P. 0011 – 0023.

REGULATION (EC) No 2037/2000 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 June 2000 on substances that deplete the ozone layer.

REGULATION (EC) No 850/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

REGULATION (EC) No 689/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 June 2008 concerning the export and import of dangerous chemicals.

**15.2. Chemical Safety Assessment**

	YES	NO
Exposure scenario attached		X
Chemical Safety Assessment (CSA) attached		X

**SECTION 16.  
OTHER INFORMATION**

Revision	Edition Date	Edit Description
n. 01	6/1/2015	First published in accordance with Hazard Communication Standard (HCS)(29 CFR 1910.1200(g))

**Bibliographic sources:**

<sup>[1]</sup> MSDS Galentis Srl  
ChemIDplus Lite

Safety Data Sheet DPX-C  
Prepared on: 3/27/15  
Revision No. 01

pubchem.ncbi.nlm.nih.gov  
stneasy.fiz-karlsruhe.de

### Acronyms

- ACGIH: American Conference of Governmental Industrial Hygienists
- ADR: Agreement concerning the carriage of dangerous goods by Road
- BCF: Bioaccumulative factor
- BEI : Biological Exposure Indices
- CAS: Chemical Abstract Service (division of the American Chemical Society)
- CHETAH : Computer programme for chemical thermodynamics and energy release evaluation
- CLP: Classification, Labelling and Packaging
- CMR: Carcinogenity, Mutagenicity, and toxic for Reproduction
- EINECS: European Inventory of Existing Commercial Substances
- EPA: US Environmental Protection Agency
- GHS: Globally Harmonized System
- IARC: International Agency for Research on Cancer
- IATA: International Air Transport Association Code
- IMDG: International Maritime Dangerous Goods Code
- IUPAC: International Union of Pure and Applied Chemistry
- LOEL: Lowest Observed Effect Level
- N.A.: Not Applicable
- N.A.: Not Available
- NOAEL: No Observed Adverse Effect Level
- NTP: National Toxicology Program
- OEL: Occupational Exposure Limit
- OSHA: Occupational Safety and Health Administration
- PPE : Personal protective Equipment
- PBT: Persistent, Bioaccumulative and Toxic substances
- RID: Regulation concerning the International carriage of Dangerous goods by rail
- TLV/TWA: Threshold Limit Value/Threshold Weighted Average
- vPvB: very Persistent, very Bioaccumulative

### DISCLAIMER

This document aims to provide guidance for appropriate handling and precaution of this product by qualified personnel or operating under the supervision of personnel trained in handling chemicals. The product should not be used for purposes other than those mentioned in section 1, unless they are given adequate written information received on how to handle the material. The provider of this document can not provide any warnings about the dangers of use or interaction with other chemicals or materials. Specialty Coating Systems, Inc. assumes no responsibility for 'the user's safe use of this product, the product suitability for the purpose for which it is applied and/or proper disposal. Information mentioned in this document should not be considered a declaration or guarantee, either expressed or implied, of merchantability, fitness for a particular purpose, quality, or any other. The information contained in this SDS is in accordance with the Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)).