



## Ryton® R-4-220BL PPS Compound

Version 1.2

Revision Date 2012-12-03

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### Product information

Trade name : Ryton® R-4-220BL PPS Compound  
 Material : 1024059, 1037738, 1024056, 1024058, 1024060, 1024061,  
 1024062, 1024063, 1024057

#### EC-No.Registration number

Chemical Name	CAS-No. EC-No. Index No.	Legal Entity Registration number
p-Dichlorobenzene	106-46-7 203-400-5 602-035-00-2	Chevron Phillips Chemicals International NV 01-2119472312-46-0004
Sodium sulfide	16721-80-5 240-778-0	Chevron Phillips Chemicals International NV 01-2119513719-34-0004
Carbon Black	1333-86-4 215-609-9	Chevron Phillips Chemicals International NV Pre-registered
Ethylene	74-85-1 200-815-3 601-010-00-3	Chevron Phillips Chemical Company LP 01-2119462827-27-0004

**Company** : Ryton® PPS and Xtel® PPS Alloys  
 10001 Six Pines Drive  
 The Woodlands, TX 77380

**Local** : Chevron Phillips Chemicals International N.V.  
 Brusselsesteenweg 355  
 B-3090 Overijse  
 Belgium

MSDS Requests: (800) 852-5530  
 Technical Information: (832) 813-4862  
 Responsible Party: Product Safety Group  
 Email:msds@cpchem.com

#### Emergency telephone:

##### Health:

866.442.9628 (North America)  
 1.832.813.4984 (International)

##### Transport:

North America: CHEMTREC 800.424.9300 or 703.527.3887  
 Asia: +800 CHEMCALL (+800 2436 2255) China: 0532.8388.9090  
 EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

**Ryton® R-4-220BL PPS Compound**

Version 1.2

Revision Date 2012-12-03

Chemcare Asia: Tel: +65 6848 9048 - Mob: +65 8382 9188 - Fax: +65 6848 9013  
 South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Responsible Department : Product Safety and Toxicology Group  
 E-mail address : MSDS@CPChem.com  
 Website : www.CPChem.com

**MEDICAL APPLICATION CAUTION:** Do not use this Chevron Phillips Chemical Company LP material in medical applications involving permanent implantation in the human body or permanent contact with internal body fluids or tissues fluids or tissues.

Do not use this Chevron Phillips Chemical Company LP material in medical applications involving brief or temporary implantation in the human body or contact with internal body fluids or tissues unless the material has been provided directly from Chevron Phillips Chemical Company LP under an agreement which expressly acknowledges the contemplated use.

Chevron Phillips Chemical Company LP makes no representation, promise, express warranty or implied warranty concerning the suitability of this material for use in implantation in the human body or in contact with internal body fluids or tissues.

**SECTION 2: Hazards identification****Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

**Classification (67/548/EEC, 1999/45/EC)**

Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

**Label elements****Labeling (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

Components are encapsulated within the product matrix.

**SECTION 3: Composition/information on ingredients**

Molecular formula : Mixture

**Mixtures****Hazardous ingredients**

Chemical Name	CAS-No. EC-No. Index No.	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [wt%]
<b>Polyphenylene Sulfide</b>	<b>26125-40-6</b>			40 - 70
Fiberglass	65997-17-3 266-046-0		Carc. 2; H351 Eye Irrit. 2; H319 STOT RE 2; H373 STOT SE 3; H335	30 - 60

**Ryton® R-4-220BL PPS Compound**

Version 1.2

Revision Date 2012-12-03

Carbon Black	1333-86-4 215-609-9	Xi; R37 Xi; R36	Carc. 2; H351 Carc. 2; H351	0,1 - 1
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For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16.

**SECTION 4: First aid measures**

- If inhaled : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion. If symptoms persist, call a physician.
- In case of skin contact : If the molten material gets on skin, quickly cool in water. Seek immediate medical attention. Do not try to peel the solidified material from the skin or use solvents or thinners to dissolve it.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- If swallowed : Do not induce vomiting without medical advice.

**SECTION 5: Firefighting measures**

- Flash point : > 500 °C (> 932 °F)  
Method: ASTM D 1929
- Suitable extinguishing media : Water. Water mist. Dry chemical. Carbon dioxide (CO<sub>2</sub>). Foam. If possible, water should be applied as a spray from a fogging nozzle since this is a surface burning material. The application of high velocity water will spread the burning surface layer. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Specific hazards during fire fighting : Risks of ignition followed by flame propagation or secondary explosions can be caused by the accumulation of dust, e.g. on floors and ledges.
- Special protective equipment for fire-fighters : Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.
- Further information : This material will burn although it is not easily ignited.
- Fire and explosion protection : Treat as a solid that can burn. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
- Hazardous decomposition products : Normal combustion forms carbon dioxide, water vapor and may produce carbon monoxide, other hydrocarbons and hydrocarbon oxidation products (ketones, aldehydes, organic acids) depending on temperature and air availability. Incomplete combustion can also produce formaldehyde. Sulfur oxides. Carbonyl Sulfide.

**Ryton® R-4-220BL PPS Compound**

Version 1.2

Revision Date 2012-12-03

**SECTION 6: Accidental release measures**

- Personal precautions : Sweep up to prevent slipping hazard. Avoid breathing dust.
- Environmental precautions : Do not contaminate surface water. Prevent product from entering drains.
- Methods for cleaning up : Clean up promptly by sweeping or vacuum.
- Additional advice : Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

**SECTION 7: Handling and storage****Handling**

- Advice on safe handling : Use good housekeeping for safe handling of the product. Keep out of water sources and sewers.

Spilled pellets and powders may create a slipping hazard.

Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary, but may not by themselves be sufficient.

- Advice on protection against fire and explosion : Treat as a solid that can burn. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**Storage**

- Requirements for storage areas and containers : Keep in a dry place. Keep in a well-ventilated place.

- Advice on common storage : Do not store together with oxidizing and self-igniting products.

**SECTION 8: Exposure controls/personal protection****Personal protective equipment**

- Respiratory protection : No respiratory protection is normally required. If heated material generates vapor or fumes that are not adequately controlled by ventilation, wear an appropriate respirator. Use the following elements for air-purifying respirators: Organic Vapor and Formaldehyde. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection. Dust safety masks are recommended when the

**Ryton® R-4-220BL PPS Compound**

Version 1.2

Revision Date 2012-12-03

- dust concentration is excessive.
- Eye protection : Use of safety glasses with side shields for solid handling is good industrial practice. If this material is heated, wear chemical goggles or safety glasses with side shields or a face shield. If there is potential for dust, use chemical goggles.
- Skin and body protection : At ambient temperatures use of clean and protective clothing is good industrial practice. If the material is heated or molten, wear thermally insulated, heat-resistant gloves that are able to withstand the temperature of the molten product. If this material is heated, wear insulated clothing to prevent skin contact if engineering controls or work practices are not adequate.
- Protective measures : Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

**SECTION 9: Physical and chemical properties****Information on basic physical and chemical properties****Appearance**

- Form : Pellets  
 Physical state : Solid  
 Color : White, tan or black  
 Odor : Mild to no odor

**Safety data**

- Flash point : > 500 °C (> 932 °F)  
 Method: ASTM D 1929
- Molecular formula : Mixture
- Vapor pressure : not applicable
- Density : 1,6 - 1,8 g/cm<sup>3</sup>
- Water solubility : Negligible

**SECTION 10: Stability and reactivity**

- Chemical stability : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Ryton® R-4-220BL PPS Compound**

Version 1.2

Revision Date 2012-12-03

**Possibility of hazardous reactions**

- Conditions to avoid : Avoid prolonged storage at elevated temperature.
- Materials to avoid : Avoid contact with strong oxidizing agents.
- Thermal decomposition : Low molecular weight hydrocarbons, alcohols, aldehydes, acids and ketones can be formed during thermal processing.

**SECTION 11: Toxicological information****Ryton® R-4-220BL PPS Compound****Acute oral toxicity** : Presumed Not Toxic**Ryton® R-4-220BL PPS Compound****Acute inhalation toxicity** : Presumed Not Toxic**Ryton® R-4-220BL PPS Compound****Acute dermal toxicity** : Presumed Not Toxic**Ryton® R-4-220BL PPS Compound****Skin irritation** : No skin irritation**Ryton® R-4-220BL PPS Compound****Eye irritation** : No eye irritation**Ryton® R-4-220BL PPS Compound****Sensitization** : Did not cause sensitization on laboratory animals.**Ryton® R-4-220BL PPS Compound**

**Further information** : This product contains RYTON® PPS POLYMER. Subchronic feeding studies of RYTON® PPS Polymer at dietary levels of up to 5% caused no detrimental effects in laboratory animals. Molten polymer may cause severe thermal burns. The interior of molten masses may remain hot for sometime because of the low thermal conductivity of the polymer. Use care when disposing of, or handling such masses. The major thermal decomposition products of molded RYTON® PPS POLYMER are carbon monoxide, carbon dioxide, sulfur dioxide, and carbonyl sulfide. The latter two are the most significant producing mucous membrane irritation, nose bleeds and finally if exposure continues, respiratory paralysis and death.

Pigments containing carbon black may have been incorporated into this product. However, the pigments in this product are bound in a polymer matrix which severely limits its extractability, bioavailability and toxicity. None of these pigments is likely to cause adverse health effects under recommended conditions of use.

**Ryton® R-4-220BL PPS Compound**

Version 1.2

Revision Date 2012-12-03

**SECTION 12: Ecological information****Ecotoxicity effects**

Elimination information (persistence and degradability)

Bioaccumulation : Does not bioaccumulate.

Mobility : The product is insoluble and sinks in water.

Biodegradability : This material is not expected to be readily biodegradable.

Additional ecological information : This material is not expected to be harmful to aquatic organisms.  
Fish or birds may eat pellets which may obstruct their digestive tracts.

**SECTION 13: Disposal considerations**

The information in this MSDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

**SECTION 14: Transport information**

**The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).**

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the MSDS and the bill of lading.

**US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)**

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

**IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)**

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

**IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)**

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR

**Ryton® R-4-220BL PPS Compound**

Version 1.2

Revision Date 2012-12-03

TRANSPORTATION BY THIS AGENCY.

**ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))**

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

**RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))**

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

**ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)**

NOT REGULATED AS A HAZARDOUS MATERIAL OR DANGEROUS GOODS FOR TRANSPORTATION BY THIS AGENCY.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

**SECTION 15: Regulatory information****National legislation**

**Major Accident Hazard Legislation** : 96/82/EC Update: 2003  
Directive 96/82/EC does not apply

**Water contaminating class (Germany)** : nwg not water endangering

**Notification status**

Europe REACH : A substance or substances in this product is not registered or notified to be registered. Importation or manufacture of this product is still permitted provided that it does not exceed the REACH minimum threshold quantity of the non-regulated substances.

United States of America US.TSCA : On the inventory, or in compliance with the inventory

Canada NDSL : This product contains one or several components listed in the Canadian NDSL list.

Australia AICS : On the inventory, or in compliance with the inventory

New Zealand NZIoC : On the inventory, or in compliance with the inventory

Japan ENCS : Not in compliance with the inventory

Korea KECI : On the inventory, or in compliance with the inventory

Philippines PICCS : On the inventory, or in compliance with the inventory

China IECSC : On the inventory, or in compliance with the inventory



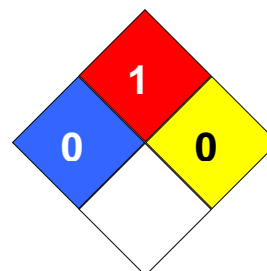
**Ryton® R-4-220BL PPS Compound**

Version 1.2

Revision Date 2012-12-03

**SECTION 16: Other information**

**NFPA Classification** : Health Hazard: 0  
Fire Hazard: 1  
Reactivity Hazard: 0

**Further information**

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this MSDS pertains only to the product as shipped.

The information provided in this Material 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.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act

**Ryton® R-4-220BL PPS Compound**

Version 1.2

Revision Date 2012-12-03

KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		

**Full text of R-phrases referred to under sections 2 and 3**

R36 Irritating to eyes.  
R37 Irritating to respiratory system.

**Full text of H-Statements referred to under sections 2 and 3.**

H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.