



# Safety data sheet

Hazard Communication Standard (HCS) - 2012  
[29 CFR 1910.1200(g)]

**Reliance Sibur**  
Elastomers Private Limited  
A partnership of excellence

## IMPRAMER™ C

### SECTION 1: IDENTIFICATION

#### 1.1 Identification of the product:

- 1.1.1 Product name: IMPRAMER™ C  
1.1.2 Chemical name: Chlorinated Poly (isoprene-co-isobutene)  
1.1.3 Synonyms: Chlorobutyl Rubber (CIIR)

**1.2 Use of the substance/  
mixture:** Tire production, technical rubber parts, rubber compound, pharmaceutical application.

#### 1.3 Manufacturer & Supplier:

- 1.3.1 Manufacturer: **Reliance Sibur Elastomers Private Limited**  
Jamnagar Mfg. Division  
Village Kanalus, Taluka Lalpur, Dist. Jamnagar,  
Gujarat - 361140

E-mail address of person responsible for the Safety Data Sheet:  
customercare.rsepl@ril.com

- 1.3.2 Emergency telephone: Site Shift Manager: +91-2884034550  
Fire Department: +91-2884035101/ +91-2884035102/ +91-2884022565  
Security: +91-2882321010  
Occupational Health centre: +91-2882325800

### SECTION 2: HAZARD(S) IDENTIFICATION

#### GHS-US Classification:

**Hazard Pictograms:** None

**Signal Word:** None

**Hazard Statement:** None

No significant health hazard under normal industrial operating conditions. Contact with molten/ hot product may cause thermal burns. Heating of product to high temperature may form toxic vapours, which can cause irritation of eyes and respiratory system.

Combustible solid, but not classified as Flammable Solids [29 CFR 1910.1200, Hazard Communication, Appendix B.7, Flammable Solids].

Auto Ignition Temperature >210°C. Products of thermal decomposition are toxic.

### SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

#### 3.1 Composition:

Chemical identity	CAS No	Conc.	Classification	Pictogram
Chlorinated copolymer of 2-methyl-1-propene and 2-methyl-1,3-butadiene	68081-82-3	97 – 99 %	Not classified <sup>(1)</sup>	
Fatty acids, C14-18 and C16-18- unsaturated Calcium salts	68424-16-8	1 – 3 %	Not classified	

**3.2 Classification according to OSHA 29 CFR 1910.1200:** Not applicable (not a dangerous mixture)

#### 3.3 Remarks on special components:

<sup>(1)</sup> The product contains additives embedded in the polymer matrix and are not released under normal handling and storage conditions. Therefore, the polymer is not considered as “Suspected of damaging fertility or the unborn child” or harmful to the skin in the form in which it is placed at the market.



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### SECTION 4: FIRST-AID MEASURES

- 4.1** No significant health hazard in normal industrial operational conditions. Spontaneous penetration of Brominated butyl rubber into human organism is impossible. Brominated butyl rubber at normal conditions is stable, non-volatile, causes non-exhaustive effects.
- 4.1.1 Inhalation:** Spontaneous penetration of Chlorobutyl Rubber into human organism is impossible. Thermal destruction may occur at high temperatures producing isobutylene, isoprene and hydrogen chloride. Chlorobutyl Rubber at normal conditions is non-volatile, causes no exhaustive effects. Inhalational poisoning is not probable.
- 4.1.2 Skin contact:** Contact with skin has no effects during normal handling. Contact with molten/ hot product may cause thermal burns. DO NOT try to peel molten polymer from the skin. Cool the burn area rapidly by flushing with large volume of cold water. Consult physician. Remove contaminated clothing and wash skin with plenty of water. Use a shower if affected area is large. Consult physician. Wash and dry carefully contaminated clothing and shoes before reuse.
- 4.1.3 Eye contact:** Contact with eyes may cause physical damage. Irritation and conjunctivitis are not observed. Wash eyes immediately with plenty of low-pressure lukewarm water for at least 15 minutes. Remove any contact lenses. Consult physician.
- 4.1.4 Ingestion:** In case of accidental swallowing of Rubber particles, penetration in airways may cause irritation of respiratory tract, cough. Wash out mouth with water and give plenty of water to drink, provided person is conscious. Never give anything by mouth to an unconscious person. Do not induce vomiting unless directed to do so by physician. If vomiting occurs naturally, have the exposed person lean forward. Consult physician.
- 4.2 Most important symptoms/ effects, acute and delayed:**
- 4.2.1 Inhalation Symptoms:** Processing vapors may irritate respiratory system.
- 4.2.2 Skin Contact Symptoms:** Contact with hot product may cause serious burns.
- 4.2.3 Eye Contact Symptoms:** Eye contact may cause mechanical damage, irritation, pain, swelling, tear, dazzling. Contact with hot product may cause serious burns.
- 4.2.4 Ingestion/ Aspiration Symptoms:** Ingestion/ aspiration may cause irritation of digestive tract. May cause gastrointestinal blockage.
- 4.3** No specific antidote. Exposure should be treated symptomatically.

### SECTION 5: FIRE-FIGHTING MEASURES

- 5.1 Suitable extinguishing media:**
- 5.1.1 In case of small fire:** Dry chemical foam, water spray or mist, carbon dioxide, sand or earth.
- 5.1.2 Other cases:** Fire extinguishers of any type, water, water vapor, fire-extinguishing foams, inert gases, sand, asbestos cloth.
- 5.2 Extinguishing media which must not be used for safety reasons:** Do not use water, if fire is caused by an electrical short circuit.
- 5.3 Specific hazards arising from the chemical:** Combustible solid. Ignited by open flame. Combustion generates irritating and toxic fumes.
- 5.3.1 Hazardous combustion products:** Hydrogen chloride and irritant fumes, Carbon oxides, soot.
- 5.3.2 Hazardous substances of thermal decomposition:** Alcohols, aldehydes, ketones, acids (C<sub>1</sub>-C<sub>4</sub>), carbon oxides.
- 5.3.3 Unusual fire & explosion hazards:** Not known.
- 5.4 Special protective equipment and precautions for fire-fighters:**



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<b>Special protective equipment for fire fighters:</b>	Wear MSHA/ NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode and protective firefighting clothing (includes firefighting helmet, face shields, gas mask, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.
<b>Firefighting procedures:</b>	Evacuate personnel not participating in firefighting from the site of the fire. Use water fog to cool intact containers and nearby storage areas.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

<b>6.1 Personal precautions:</b>	Take precautionary measures against static discharges. Provide adequate ventilation. Provide air monitoring of the workplace.
6.1.1 Protective equipment:	Remove ignition sources. No smoking. Take measures of fire prevention. Skin/ Eye/ Face protection is required. In emergency or in case of increase of hazardous substances concentration at the workplace wear positive pressure MSHA/ NIOSH-approved self-contained breathing apparatus.
6.1.2 Emergency procedures:	Refer to Section 8, Exposure Controls/ Personal Protection equipment
6.1.3 Environmental precautions:	When needed, call Emergency response telephone number. Do not allow penetration of the product into water reservoirs, surface and ground water, sewer ducts and soil. Preventing disposal into water reservoirs of contaminated water without treatment.
<b>6.2 Methods and materials for containment and cleaning up:</b>	Stop leak if it is possible to do it without risk. Do not touch or walk through spilled material. Sweep up spilled substance to avoid slipping hazard. Avoid generating dusty conditions and provide ventilation When the product gets into water or ground collect the product in a separate container for recycling or disposal. See Section 13 for Disposal.

## SECTION 7: HANDLING AND STORAGE

<b>7.1 Precautions for safe handling:</b>	Handle in accordance with good industrial hygiene and safety practice. Observe good personal hygiene, including washing of hands before eating.  Observe fire safety rules. Avoid all sources of ignition. No smoking. Take precautionary measures against static discharges.  Use intrinsically safe equipment. Assure air tightness of equipment and communication lines. Equipment grounding is mandatory. Provide thorough sealing of process equipment.  Minimise dust and aerosols generation and accumulation.  Provide input-extract and local ventilation of work zones to ensure that the occupational exposure limit is not exceeded. In case of insufficient ventilation, wear suitable respiratory equipment (See Section: 8). Regularly control work zone air.  Do not swallow. Avoid contact with eyes and skin. Do not ingest or inhale combustion or decomposition products.  Workers should be protected from the possibility of contact with molten product.
<b>7.2 Conditions for safe storage, including any incompatibilities:</b>	Store in a cool, dry, well-ventilated area. Keep away from direct sunlight, moisture and incompatible substances in a closed container. Store separately from food. Keep away from heat and sources of ignition. <u>Incompatible substances:</u> oxidizing substances, acids, caustics.



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### SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

**8.1** No Exposure Control applicable for:  
Co-polymer of isoprene and isobutene (CAS 68081-82-3).

Ingredient	CAS No.	Exposure Limits			Other information
		OSHA PEL	NIOSH REL	ACGIH TLV	
Particulates Not Otherwise Regulated (Total Dust)	-	PEL-TWA: 15 mg/m <sup>3</sup> (50 mppcf*) total dust; 5 mg/m <sup>3</sup> – respirable fraction	Not established	TWA: 10 mg/m <sup>3</sup> – Inhalable particles, 3 mg/m <sup>3</sup> – Respirable particles	Health Factors and Target Organs: Lung disease, Eye, skin, and respiratory irritation

**8.2 Appropriate engineering controls:** Provide adequate ventilation at workplaces. Compulsory monitoring of air conditions in work areas. Control of concentrations of gases and fumes during thermal processing operations. Engineering controls should be adequate to ensure airborne levels do not approach or exceed the exposure limit value for residuals. All processing equipment should be secured and earthed for safe operations.

**8.3 Individual protection measures:** Use of personal protective equipment must be consistent with good occupational hygiene practices. General requirements for personal protective equipment are described in [1910.132].

**8.3.1 Hygiene measures:** Personal hygiene and industrial sanitation in the production at the facility (wash hands at the end of each work shift and before eating, drinking, smoking or using the toilet).

**8.3.1 Eye/ Face protection:** Wear Goggles giving complete protection to eyes [ANSI Z87.1, 1910.133].

**8.3.2 Skin Protection (Hand and Body):** Wear approved protective gloves [Rubber gloves. 1910.138] If contact with hot product is anticipated, gloves should be heat-resistant and thermally insulated. Wear insulating gloves [1910.138] (heat). Wear suitable protective clothing. Wear chemical resistant protective clothing and protective shoes (antistatic boots).

**8.3.3 Respiratory Protection:** Not required (if is used workplace conditions). In emergency or in case of increase of hazardous substances concentration at the workplace wear positive pressure MSHA/ NIOSH-approved self-contained breathing apparatus [1910.134].

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**9.1 Appearance:**

**9.1.1 Physical state (20°C/ 1013 hPa)** Elastic solid; (rubber is produced in the form of bales)

**9.1.2 Color** White to yellow

**9.2 Odor** Peculiar

**9.3 Odor threshold** Not available

**9.4 pH** Not applicable, insoluble in water.

**9.5 Melting point/freezing point** Not available.

**9.6 Initial boiling point/ boiling range** Not available.

**9.7 Flash point** Not applicable

**9.8 Evaporation rate** Not available

**9.9 Flammability (solid, gas)** Not available.

**9.10 Upper/ lower flammability or explosive limits** Not available

**9.11 Vapor pressure** Not available (does not evaporate).

**9.12 Vapor density** Not available (does not evaporate).

**9.13 Density (g/ cm<sup>3</sup> at 20°C)** 0.92 - 0.93 g/cm<sup>3</sup>

**9.14 Solubility(ies)** Insoluble in water. Soluble in aromatic solvents.

**9.15 Partition coefficient: n-octanol/ water** Not available.

**9.16 Auto-ignition temperature** >210°C (>410°F)

**9.17 Decomposition temperature** Not available.

**9.18 Viscosity** Not available.



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### SECTION 10: STABILITY AND REACTIVITY

<b>10.1 Reactivity:</b>	The rubber is stable under prescribes conditions of storage and handling and use. Exposure to high temperatures can cause thermal decomposition with emissions of hydrogen chloride, isobutylene and isoprene.
<b>10.2 Chemical stability:</b>	Stable under normal conditions of storage, handling and use.
<b>10.3 Possibility of hazardous reactions:</b>	None specific.
<b>10.4 Conditions to avoid:</b>	Avoid high temperatures, open flame, sparks, long term exposure to direct sunlight, and contact with incompatible materials. Take precautionary measures against static discharges.
<b>10.5 Incompatible materials:</b>	Strong oxidizing agents.
<b>10.6 Hazardous decomposition products:</b>	None under normal conditions at ambient temperatures.
<b>10.6.1 Hazardous substances of thermal decomposition:</b>	Alcohols, aldehydes, ketones, acids (C <sub>1</sub> -C <sub>4</sub> ), carbon oxides, hydrogen chloride and other undetermined compounds.

### SECTION 11: TOXICOLOGICAL INFORMATION

<b>11.1 General information:</b>	No significant health hazard in normal industrial use conditions. The substance is a non-volatile rubber and is produced in the form of briquettes. Hence there is no potential for any inhalation exposure. Poly (isoprene-co-isobutene) has no local irritating effect on the gastrointestinal tract when inhaled, conjunctiva, skin-resorptive and sensitizing effect. Exposure to thermal decomposition products may cause irritation of respiratory system, eye irritation.
<b>11.1 Symptoms related to the physical, chemical and toxicological characteristics:</b>	No significant health hazard in normal industrial use conditions. In case of exposure to rubber combustion or thermal decomposition products, please refer to Section 4 for additional information.
<b>11.2 Delayed and immediate effects and also chronic effects from short- and long-term exposure</b>	
<b>11.2.1 Acute toxicity:</b>	
Inhalation:	Not classified. No data available
Ingestion (Oral):	Non-Toxic
Dermal:	Not classified. No data available
<b>11.2.2 Irritation/ Corrosivity:</b>	
Skin irritation/ Corrosion:	Not classified. Skin contact with molten/ hot product may cause serious thermal burns.
Eye irritation:	Not classified. Contact with eyes may cause physical damage. Eye contact with molten/ hot product may cause serious thermal burns. Thermal decomposition products may cause irritation of eye.
Respiratory tract:	Not classified. Inhalation of thermal decomposition products may cause irritation of respiratory system.
Sensitization:	Skin sensitization: Not classified. No data available. Respiratory system: Not classified. No data available.
<b>11.2.3 Repeated dose toxicity:</b>	
Chronic oral toxicity:	Not classified. No data available.
Chronic inhalation toxicity:	Not classified. No data available
Chronic dermal toxicity:	Not classified. No data available
Germ cell mutagenicity:	Not classified. No data available
Carcinogenicity	Not classified. No data available
Reproductive toxicity:	Not classified. No data available



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STOT-single exposure: Not classified. No data available  
STOT-repeated exposure: Not classified. No data available

No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

IARC, NTP, OSHA, ACGIH, US EPA: Not listed

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 General Information:

Product is stable in normal conditions and does not form toxic compounds with other substances in air and water. The product is non-biodegradable, however is non-hazardous to the environment.  
Pollution of water bodies and soil with rubber flakes is likely if the process effluent is discharged without any treatment during spillage and accidents.

**12.2 Ecotoxicity (aquatic and terrestrial, where available):** Aquatic toxicity: Not expected to be acutely toxic. May cause adverse physical damage if ingested by waterfowls or aquatic life.

**12.3 Persistence and degradability:** No specific ecological data are available for this product.  
Being water-insoluble, rubber is expected to be inert in the environment. No significant bio-degradation is expected.  
 $t_{1/2}$  : > 30 d (extremely stable)

**12.4 Bio-accumulative potential:** Effects on nature due to bio-accumulation are not known.

**12.5 Mobility in soil:** No information available. The product is insoluble in water.

**12.6 Other adverse effects (such as hazardous to the ozone layer)** No information available.

## SECTION 13: DISPOSAL CONSIDERATIONS

Disposal should be in accordance with local, state and national legislation. This product should not be dumped, spilled, rinsed or washed into sewers or public waterways.  
Place into a suitable closed container for disposal – this material can be recycled.  
Wastewater should be treated.  
Packaging waste shall be collected and send for recycling. Rubber waste shall be removed to disposal.

## SECTION 14: TRANSPORT INFORMATION

**General Information:** The product is not covered by international regulations on the transport of dangerous goods.

**UN number:** None

**UN proper shipping name:** Not applicable.

**Transport hazard class(es):** Not applicable.

**Packing group, if applicable:** Not applicable.

**Environmental hazards (e.g., Marine pollutant (Yes/No))** Not applicable.

**Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)** Not applicable.

### Special precautions:

Ensure that persons transporting the product know what to do in the event of an accident or spillage. For information regarding Exposure Controls/ Personal Protection see Section 8 of the SDS.



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### 15. REGULATORY INFORMATION

#### Safety, health and environmental regulations specific for the product in question

OSHA regulation (29 CFR 1910.119)	Not applicable.
CERCLA 103 regulation (40 CFR 302.4)	Not applicable.
EPCRA 302 regulation (40 CFR 355.30)	Not applicable.
EPCRA 304 regulation (40 CFR 355.40)	Not applicable.
EPCRA 313 regulation (40 CFR 372.65)	Not applicable.
TSCA	All components are listed in TSCA inventory.

### 16. OTHER INFORMATION

#### 16.1 Abbreviations and acronyms:

LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LC50	Lethal Concentration to 50 % of a test population
PBT	Persistent, bio accumulative, toxic chemical
vPvB	Very Persistent, Very Bio accumulative
UN	United Nations
OSHA	Occupational Safety & Health Administration
PEL	Permissible Exposure Limit
TWA	Time-Weighted Average
STEL	Short-Term Exposure Limits
PEL-C	PEL ceiling limits
REL	Recommended Exposure Limit
NIOSH	National Institute for Occupational Safety and Health (USA)
ACGIH	American Conference of Governmental Industrial Hygienists
IDLH	Immediately dangerous to life or health
IARC	International Agency for Research on Cancer
Ca	Carcinogen
TSCA	Toxic Substances Control Act

#### 16.2 Key literature references and sources:

- TOXNET databases on toxicology, hazardous chemicals, environmental health, and toxic releases
- U.S. National Library of Medicine, NCIS
- Russian Register of Potentially Hazardous Chemical and Biological Substances (FBEPH).
- 2-methylpropene-, polymer with 2-methylbutadiene-1,3. Dossier of potentially hazardous chemical and biological substance # BT 000686, 1995, Ministry of Health of the Russian Federation.

#### 16.3 Disclaimer:

This Safety Data Sheet and the health, safety and environmental information it contains are intended to provide a summary of our knowledge and guidance regarding use of the designated Product. Its contents are offered in good faith as accurate and complete as of the date specified below, but without guarantee. The data herein applies only to the Product sold by entities of the Reliance group and not to products sold by others. It relates only to the Product and does not relate to its use in combination with any other product or material or in any process.

Local laws and regulations and conditions of use and suitability of the product for particular uses are beyond the control of Reliance Sibur; all risks of use, storage, handling, transportation and disposal of the Product are therefore assumed by the user and Reliance Sibur expressly disclaims all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the Product. Reliance Sibur shall not be responsible for any damage or injury resulting from abnormal use of the Product, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the Product.

Appropriate warnings and safe handling procedures should be provided to all handlers and users. User shall communicate to Reliance Sibur any new information on hazardous properties of the Product and/ or new information relevant to risk management measures for the identified uses.

Alteration or re-publication of this document in whole or part is strictly prohibited.

#### 16.4 Revisions:

Version: 1.0 – First Issue.