# RAMTOUGH® RZ220

*Version: 2.0*
*Validation Date: 13/06/2010*



## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

**Product information**

Trade name : RAMTOUGH RZ220
This MSDS applies to all RAMTOUGH RZ220 grades which differ in additive package and color.

Type : Recycled PC

Use of the Substance/Preparation : May be used to produce molded or extruded articles or as a component of other industrial products.

Company : Polyram Ram-On Industries
Ram On 19205
Israel

Telephone : ++ (972) 4 6599900

Emergency number : ++ (972) 4 6599999

## SECTION 2: HAZARDS IDENTIFICATION

No special health hazards are associated with this material in solid pellet form as supplied by the manufacture

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Product definition (REACH)** : Preparation

**Chemical nature**

| Chemical Name | CAS No. | Concentration | OSHA PEL |
|---|---|---|---|
| Polycarbonate | [ 25971-63-5 ] | 96-100 % wt | |
| Additives and Polymer Stabilizers | CAS# Multiple | 0-2% wt | Not Established |
| *Carbon Black | [1333-86-4] | 0.1-2% wt | 3.5 $mg/m^3$ TWA |

*for black products
Within the present knowledge of the supplier, this product does not contain any hazardous ingredients in quantities requiring reporting in this section, in accordance with EU or national regulations.

## SECTION 4: FIRST AID MEASURES

General advice : Remove from exposure, lie down. Never give anything by mouth to an unconscious person. No hazards which require special first aid measures If a person vomits when lying on his back, place him in the recovery position.

Skin contact : Cool skin rapidly with cold water after contact with molten material. Do not peel polymer from the skin. Obtain medical attention.

Eye contact : Flush eyes with plenty of water. Get medical attention if irritation develops or persists.

Inhalation : if dust inhalation cause distress symptoms, move to fresh air and remove material from eyes, skin and clothing

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| Ingestion | : | Ingestion is not likely in the available physical form. If ingested, seek medical attention. |

## SECTION 5: FIRE FIGHTING MEASURES

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| Flammability | : | Material is combustible and will burn by direct ignition. |
| Suitable extinguishing media | : | Dry chemical powder, foam, carbon dioxide, water spray, sand or earth. |
| Specific hazards during fire fighting | : | Fire will produce dense black smoke containing hazardous combustion products, carbon oxides, hydrocarbons fragments and others |
| Special protective equipment for fire-fighters | : | Fire –fighters should wear appropriate protective equipment and self- contained breathing apparatus (SCBA) with full face –piece operated in positive pressure mode. |
| Further information | : | Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Do not allow run-off from fire fighting to enter drains or water courses. |
| Special Conditions to Avoid | : | prevent an exposure to open flames. |

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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| Personal precautions | : | Ventilate the area; Use personal Protection recommended in section 8.Pellets may be a slipping hazard. |
| Environmental precautions | : | Try to prevent the material from entering drains or water courses. Do not contaminate surface water. This product is not regulated by RCRA. |
| Methods for cleaning up | : | Clean up promptly by sweeping or vacuum. Allow molten materials to solidify before disposal. |

## SECTION 7: HANDLING AND STORAGE

**Handling Procedures and Equipment**

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| Advice on safe handling | : | Handle in accordance with good industrial hygiene and safety practices. For personal protection see section 8. Provide appropriate exhaust ventilation at dryers, machinery and at places where dust or volatiles can be generated. Secondary operations which may produce dust explosive hazard prevent dust accumulation. |
| Requirements for storage areas and containers | : | Keep container tightly closed in a dry and well-ventilated place. Protect from contamination. Avoid excessive heat. Once a bag has been open, keep away from humidity, or dry before reutilization |

## SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION

**Engineering measures**

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| Dust | : | Use adequate ventilation during heating processes, or if dusty conditions prevail when handling powdered materials. Processing fume condensate may be a fire hazard and toxic, remove periodically from exhaust hoods, ductwork and other surfaces using appropriate personal protection. For storage and ordinary handling, general ventilation is adequate. |

**Personal protective equipment**

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| Respiratory protection | : | The raw material is composed of pellets and not powder. Hence, on normal conditions of use the material does not produce dust. However, if dust is produced, |

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| | | for example in strong abrasive conditions, use appropriate respiratory protection and refer to the National exposure limits. |
| Hand protection | : | When handling hot material, wear heat-resistant protective gloves that are able to withstand the temperature of molten product. |
| Eye protection | : | Safety glasses with side-shields |
| Skin and body protection | : | The material does not represent a skin hazard. Use good industrial practice to minimize contact with skin. However, when handling pellets or powder, avoid prolonged or repeated contact with skin. |
| Hygiene measures | : | Do not eat or drink while processing the product; wash hands before breaks. Keep away from food and drink General precaution for all plastics and elastomers: Do not breathe fumes evolved from hot polymer. |

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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| Physical State | : | Solid |
| Odor and appearance | : | Odorless color depend on specific grade |
| Specific Gravity / Density (20 °C) | : | 1.15-1.30 ($g/cm^3$) |
| Vapor Density (Air = 1) | : | NA |
| Vapor Pressure (mmHg) | : | NA |
| Evaporation rate | : | NE |
| Boiling Point | : | NA |
| Flash point | : | NE |
| Auto-ignition temperature | : | NE |
| Melting point / range | : | Various |
| Thermal decomposition | : | >320$^{o}$C |
| pH | : | NA |
| Coefficient of Water | : | NA |
| Solubility in Water (20 °C) | : | Negligible |

## SECTION 10: STABILITY AND REACTIVITY

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| Stability | : | Stable at normal conditions. Hazardous polymerization does not occur. |
| Reactivity | : | Not reactive under recommended condition of handling, storage, processing, and use. |
| Conditions to avoid | : | Avoid heating for prolonged periods above the recommended upper processing limit |

## SECTION 11: TOXICOLOGICAL INFORMATION

The product is not hazardous to health, provided it is correctly handled and processed

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| Irritability effect on skin | : | Product does not expected to be skin sensitizer. |
| Irritability effect on eyes | : | Product does not expected to be eye irritant |

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| Sensitization | : Non sensitizing. |
| Chronic health hazards | : No information available |

## SECTION 12: ECOLOGICAL INFORMATION

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| General | : This material is not expected to be harmful to the ecology.<br>The product in not readily biodegradable. |

## SECTION 13: DISPOSAL CONSIDERATIONS

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| Waste disposal | : Like most thermoplastic plastics the product can be recycled. Where possible recycling is preferred over disposal or incineration. Do not contaminate ponds, waterways or ditches with chemicals or used containers. If recycling is not practicable, dispose in compliance with local regulations. Can be land filled, when in compliance with local regulations. |
| Contaminated packaging | : Empty containers should be taken for local recycling or waste disposal. |

## SECTION 14: TRANSPORTATION INFORMATION

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| Regulatory status | : Not regulated. |

## SECTION 15: REGULATORY INFORMATION

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| Labeling according to EC regulations | : not regulated |

## SECTION 16: OTHER INFORMATION

**Abbreviations**
**NA** = not applicable, **ND** = not determined, **NE** = not established.

**Caution do not use Polyram materials in applications involving implantation within the body; direct or indirect contact with the blood pathway; contact with bone, tissue, tissue fluid or blood; or prolonged contact with mucous membranes. Polyram materials are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. Polyram will not provide to customers making devices for such applications any notice, certification or information necessary for such medical device use required by FDA regulation or any other statute.**
**Polyram makes no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues or fluids.**

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**Preparation date of MSDS**

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|---|---|
| Prepared by | : Product stewardship (Research and Development Department) |
| Phone Number of Preparer | : ++ (972) 4 649959 |

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