PRODUCT INFORMATION SHEET - Combustion Modified Flexible Polyurethane Foam

IMPORTANT INFORMATION: Flexible polyurethane foam is an “article”, not a chemical. It is not classified as dangerous under the Chemicals (Hazard Information and Packaging for Supply) Regulations (CHIP), and therefore does not require a Safety Data Sheet as stipulated in this regulation. It is exempt from the requirements to register under REACH. As a service to our customers, we have produced this Product Information Sheet.

SECTION I – PRODUCT IDENTIFICATION

Product Name: Combustion Modified Flexible Polyurethane Foam
Other Names: Combustion modified ether (CME) foam, Combustion modified high resilience (CMHR) foam, Combustion modified Viscoelastic foam (CMVE) and Rebond/ Chip Foam.
Foam Grades: R502/2

SECTION II – PHYSICAL AND CHEMICAL CHARACTERISTICS

Since flexible polyurethane foam is a solid, physical characteristics such as boiling point, vapor pressure, vapour density evaporation rate, etc., do not apply.

Appearance: Cellular flexible material, white to off-white unpigmented colour. May also be in various colours.
Density: 14 - 220 kg per cu metre
Solubility in Water: Insoluble
Stability and Reactivity: Stable. No hazardous polymerization will occur in normal use. Prolonged exposure to temperatures in excess of 115°C may cause some loss of volatile components (e.g., flame retardants) through evaporation. Unprotected foam will discolor in the presence of UV light with little effect on physical properties. Solvent resistance will vary with solvent type.
SECTION III – FIRE HAZARD INFORMATION

Auto-ignition Point: In excess of 315°C (ASTM D 1929)
Fire Hazard: Combustion modified high resilience, combustion modified polyether and combustion modified bonded polyurethane foams comply with the requirements of the Furniture And Furnishings (Fire)(Safety) Regulations 1988 at the time of manufacture. It must be noted however, that the flame retardant characteristics of the foam will be affected when this foam is subject to a heat source over and above that stated in the above regulations. Do not expose polyurethane foam to open flames or any other direct or indirect high temperature ignition sources such as burning operations, welding, space heaters or naked lights.

Once ignited, even combustion modified polyurethane foam in this condition will burn rapidly, releasing great heat and consuming oxygen at a high rate. In an enclosed space the resulting deficiency of oxygen will present a danger of suffocation to the occupants. Hazardous gases released by the burning foam can be incapacitating or fatal to human beings if inhaled in sufficient quantities.

Once ignited, all polyurethane foam is difficult to extinguish. Foam fires that appear to be extinguished may smoulder and re-ignite. Always have fire officials determine whether a fire has been extinguished.

Piles of foam dust can be readily ignited and presents a potential fire hazard. High concentrations of foam dust in the air can be a potential explosion hazard if exposed to flame, sparks, or other ignition sources.

Extinguishing Media: Water, dry chemical, carbon dioxide
Fire-fighting Protection: Fire-fighting personnel must be equipped with self-contained breathing apparatus (SCBA) and fire-fighting clothing.

SECTION IV – HEALTH HAZARDS

Exposure Limits: None established
Acute Toxicity: · LD50 (oral): >5000 mg/kg (rat)
· LD50 (dermal): No data available
· LC50 (inhalation): No data available

Note:
· Foam is not known to be a skin irritant.
· Foam dust can cause eye irritation.
· Foam dust generated from such operations as continuous grinding or buffing can create nuisance particulates, this can cause irritation to the respiratory tract or even lung infection, airway obstruction and fibrosis.
· The Control of Substances Hazardous to Health Regulations (COSHH), includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m³ 8-hour TWA of inhalable dust or 4 mg.m³ 8-hour TWA of respirable dust.
SECTION V – HANDLING AND STORAGE

- Keep foam away from sparks, naked lights, open flames, exposed electrical elements, or other ignition sources. Smoking should be forbidden in areas where material is stored or processed.
- It is advisable to have adequate sprinkler protection where large volumes of polyurethane foam are kept (e.g., warehouses, fabrication areas and storage rooms).
- Never use polyurethane foam as an exposed interior wall or ceiling finish.
- Maintain sufficient aisle space to permit access for fire-fighting equipment and personnel to all foam storage areas.
- Do not allow cuttings or waste polyurethane foam to accumulate.
- Be aware that terms sometimes used to describe polyurethane foam, like “fire retardant” and “flame resistant”, do not mean fire safety under all conditions. Flammability ratings from small-scale laboratory tests are not to be taken as an indication of the material’s behavior under actual fire conditions.

SECTION VI – PERSONAL PROTECTION AND EXPOSURE CONTROLS

Protective Equipment: Unless exposure to foam dust is anticipated, dust masks, goggles, and gloves are not required.

Ventilation: Mechanical ventilation should be considered in operations that generate large quantities of foam dust, or where thermal decomposition of the polyurethane foam occurs (e.g., hot-wire cutting, heat sealing, hot stamping and flame laminating).

SECTION VII – EMERGENCY AND FIRST AID PROCEDURES

Skin: Wash off any foam dust.

Eyes: Flush thoroughly with water.

Ingestion: None necessary.

Inhalation: Consult physician if coughing, discomfort, or obstruction of air passage occurs.

The information for Combustion Modified Flexible Polyurethane Foam presented here is offered for your consideration, investigation and verification. The information is presented in good faith and was obtained from sources Ramsay Rubber believes to be reliable. Ramsay Rubber, however, makes no representation as to the completeness and accuracy. Ramsay Rubber makes no warranty, express or implied, with respect to the information contained herein. Ramsay Rubber cannot anticipate all conditions under which this information and the product may be used. The conditions of handling, storage, use, and disposal of the product are beyond Ramsay Rubber’s control. Thus, we expressly disclaim responsibility or liability for any loss, damage or expense arising out of reliance on the information contained herein. You are advised to make your own determination as to safety, suitability and appropriate manner of handling, storage, use and disposal.