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| NBR/HNBR | | | |  |
| Material Safety Data Sheet | Compound | NBR/HNBR | Rev. 0 | |
| | Designation | NBR/HNBR | 01-2015 | |
| <i>NOTE: This Material is a fully vulcanized rubber and will not release any products unless under fire.</i> | | | | |

1. PRODUCT AND COMPANY IDENTIFICATION


| | |
|-------------------------|--|
| PRODUCT NAME: | NBR/HNBR |
| SYNONYMS: | Nitrile rubber/Hydrogenated Nitrile rubber |
| PRODUCT CODES: | |
| MANUFACTURER: | M seals A/S |
| DIVISION: | |
| ADDRESS: | Bybjergvej 13 , 3060 Esbjerg |
| EMERGENCY PHONE: | +45 19130205 |
| CHEMICAL NAME: | NBR/HNBR |
| CHEMICAL FAMILY: | Nitrile-Butadiene Rubber |
| PRODUCT USE: | O-rings, gaskets etc. |
| SECTION 1 NOTES: | This MSDS is based on a fully vulcanized rubber and will not release any substances during normal use. |

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Ingredient: | % weight: | CAS No. | Hazard class*: | Risk phrase*: |
|---|---------------------------------------|---------------|----------------|----------------|
| Acrylonitrile butadiene copolymer with curatives, Additives, fillers, oils and antidegradants added for specific material properties. | Percentage composition not available. | Not allocated | Not applicable | Not applicable |
| *Hazard class & Risk phrase | | | | |
| These columns are only completed for ingredients which is classified as hazardous and is present in a sufficient concentration to make the overall substance hazardous. | | | | |

3. HAZARDS IDENTIFICATION

These products when handled according to good working and hygienic practices are not dangerous to human health and the environment. However, degradation by chemicals, aging, heat or fire may produce a toxic and/or corrosive residue depending on the circumstances of degradation and other materials involved.

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| 4. FIRST AID MEASURES | |
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| Eyes: | No effects requiring first aid are expected during normal use. However, if small particles enter the eye, flush with sterile water. If irritation persists seek medical attention. |
| Skin: | No effects requiring first aid are expected during normal use. After contact with skin wash with soap and water. |
| INGESTION: | No effects requiring first aid are expected during normal use. If ingested do not induce vomiting and drink copious amount of water. |
| INHALATION: | No effects requiring first aid are expected during normal use. If exposed to fumes received from decomposition products, remove patient to fresh air. If breathing problems occur seek immediate medical attention. |
| Other: | In all cases of exposure to thermally degraded product, see immediate medical advice indicating that hydrogen cyanide is a decomposition product. |

| 5. FIRE-FIGHTING MEASURES | |
|--------------------------------------|--|
| Extinguishing media: | Water spray, dry powder, carbon dioxide and foam |
| Fire and explosion hazard: | Once ignited nitrile will continue to burn with the evolution of dense smoke. Hazardous decomposition products resulting from overheating or combustion: Carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide and small amounts of aliphatic and aromatic hydrocarbons. |
| Special protection equipment: | Inhalation of fumes must be avoided. Fire fighters should wear a self-contained breathing apparatus which meets appropriate standards operated in positive pressure mode, and full turnout gear. Wear adequate skin protection to protect from thermal combustion products. |

| 6. ACCIDENTAL RELEASE MEASURES | |
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| No material specific actions are required. Collect the spilled material and reuse or dispose as in section 13. | |

| 7. SAFETY PRECAUTIONS HANDLING AND STORAGE | |
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| Handling: | No special precautions required. |
| Storage: | Store in cool and well ventilated area away from direct sunlight and sources of ignition. Store in original packaging showing codes and date of manufacture. |

| 8. EXPOSURE CONTROLS/PERSONAL PROTECTION | |
|---|---|
| Engineering measures: | Not required under conditions of normal use |
| Respiratory protection: | Not required under conditions of normal use |
| Hand and skin protection: | Not required under conditions of normal use |

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| Eye protection: | Not required under conditions of normal use Wear safety glasses during machining. |
| Other protection: | Not required under conditions of normal use |
| Work hygiene: | Do not eat or smoke when handling. Wash hands after handling. |
| EXPOSURE GUIDELINES: | Not required under conditions of normal use |

9. PHYSICAL AND CHEMICAL PROPERTIES

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|-------------------------------|-----------------------------|
| Appearance: | Solid state rubber |
| Odour: | Mild aromatic |
| Physical state: | Solid |
| Solubility in water: | Insoluble |
| Flash point: | >200°C |
| Freezing point: | N.A. |
| Vapor pressure (mmHg): | N.A. |
| Specific gravity : | 1 to 1,65 g/cm ³ |

10. STABILITY AND REACTIVITY

| | |
|---------------------------------|--|
| Stability: | Stable under normal conditions |
| Thermal decomposition: | Above 200°C |
| Hazardous decomposition: | Carbon monoxide, carbon dioxide, oxides of nitrogen, hydrogen cyanide, small amounts of Aliphatic and aromatic hydrocarbons. |


11. TOXICOLOGICAL INFORMATION

For a comprehensive description for the various toxicological (health) effects which may arise if the user comes into contact with the substance refer to section 3, "hazards identification"

12. ECOLOGICAL INFORMATION

The ecological effects of the products have not been established. The product is not expected to be substantially biodegradable. The material contains no Chloroflourocarbons(CFC)

13. DISPOSAL CONSIDERATIONS

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Disposal at approved landfill site, or by high temperature incineration using licensed contractors.
Disposal must be in accordance with local authority and national regulations.

14. TRANSPORT INFORMATION

The product is not classified as dangerous under transport regulations.

15. REGULATORY INFORMATION

This product has been classified in accordance with the dangerous substances directive.

Classified as dangerous: No

Risk Phrases: Not applicable

Safety phrases: Not applicable

Symbols: None

16. OTHER INFORMATION

OTHER INFORMATION: None

DISCLAIMER: The information contained herein is based on our state of knowledge on the day of issue. It is the duty of the enduser to ensure that this information is sufficient and complete with respect to the intended use.

Date: _____

Sign: _____