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|---|--------------------------|
|  | PRODUCT MSDS FILE |
| Mono Tube Pressurised With Top Mounting | |
| Updated | |
| 20/09/2010 | |

01 = COMPANY DATA & PRODUCT IDENTIFICATION

| | |
|--------------------------------------|--|
| 91/155/EWG & 88/379/EEC | |
| <i>Brand name / part number</i> | = ***-18080-*** |
| <i>Details of supplier</i> | = TENNECO |
| <i>Address of supplier MSDS Data</i> | = Schurhovenveld 1037 3800 Sint Truiden BELGIUM |
| <i>Phone number of supplier</i> | = + 32 11 703 000 |
| <i>Product Contact Person</i> | = Bart Boschmans |
| <i>Phone number Contact Person</i> | = +32 11 703 300 |
| <i>Emergency information number</i> | = + 32 11 216 216 |
| <i>Poison Key Data Reference</i> | = MINERAL OIL CONTACT |

02 = COMPOSITION – COMPONENTS

Chemical characteristics

Applies to : COMPLETE PRODUCT

| % W | % V | Components | Hazard Symbol | R Sentence(s) |
|-----|-----|-----------------------|---------------|-----------------|
| | | Mineral oil | NA | Xn - R65 |
| | | Nitrogen | NA | |
| | | Steel Parts | NA | |
| | | Plastic Parts | NA | |
| | | Aluminum Parts | NA | |

03 = POTENTIAL HAZARDS

Applies to : DAMPER OIL CONTAINED IN PRODUCT

Description of potential hazards

Intensive, lengthy and repeated skin contact with mineral oil can lead to skin irritation

Safety risks

Avoid formation of oil mist. Do not spray oil, do not heat

Environmental hazards

Do not allow to be discharged, voluntary or involuntary into the environment. Damper oil is not completely biologically degradable and can has the potential to cause contamination issues

04 = FIRST AID MEASURES WHEN EXPOSED TO PRODUCT

Applies to : DAMPER OIL CONTAINED IN PRODUCT

General information

Potentially causes loss of natural skin grease and irritation when in contact with skin for a longer period of time

After inhalation

Mostly only after being exposed to oil mist (potentially as oil-aerosols). Provide fresh air. Seek medical advice if symptoms persist.

After skin contact

Rinse well with soap and water. Intensive skin care required. Seek medical advice if symptoms persist

After eye contact

Rinse immediately with plenty of tap water (drinking water quality) for 10 minutes minimum

After swallowing

Do not induce vomiting, immediately call for medical attention by doctor

Information for the doctor

Symptomatic treatment after exposure removed

05 = FIRE FIGHTING MEASURES

Applies to : COMPLETE PRODUCT

Suitable quenching agents

Ensure that quenching material is suitable for background fires as well. Product may burn due to presence of plastic or rubber parts mounted and oil contained in product

Unsuitable quenching materials for safety reasons

Product contains oil which will float on water, so may as such propagate fire. Use adequate quenching products to prevent

Special hazards due to the material or combustion products

Product is high pressurized with Nitrogen Gas. Cool down if affected by heat (fire). Rubber seal may be damaged by fire and release pressure from product, potentially entailing oil to be ejected as well

Special protective equipment required for fire-fighting

Ensure that protective equipment is suitable for background fires as well

06 = MEASURES IN CASE OF RELEASE OF PRODUCT

Applies to : DAMPER OIL CONTAINED IN PRODUCT

Personal safety measures
Prevent damper oil from coming into contact with skin. Immediately remove contaminated clothing and dispose off or clean adequately

Environmental measures
Prevent damper oil from getting into the sewers or surface water or being discharges onto permeable soil. Clean up as soon as possible to prevent contamination to spread. Dispose off cleaning materials in an appropriate way. Pay attention to the potential for auto ignition of oil contaminated rags

Procedures for cleaning / collecting spills
Collect damper oil with a material(s) suited to absorb oil and dispose of contaminated materials according to the regulations. Be aware some oil contaminated absorbants have the potential for auto ignition

Supplementary advice
NA

07 = HANDLING AND STORAGE

Applies to : COMPLETE PRODUCT

Handling
Keep product in original packing as long as possible. Avoid rough handling which may cause damage. Do not pierce or open other then at indicated location, follow instructions for disposal

Storage
Store product in original packing, consider product contains oil (fire prevention, fire load). Do not expose to temperature extremes (> 50°C nor < -10°C)

08 = EMPLOYEE EXPOSURE LIMITS & PERSONAL PROTECTION EQUIPMENT

Applies to : DAMPER OIL CONTAINED IN PRODUCT

Supplementary advice for the configuration of technical plant when handling product
Product does not contain any relevant quantities of materials with critical values that would necessitate workplace monitoring

| Component | TLV | | | |
|-----------|-----|--|--|--|
| NA | NA | | | |

Components with workplace-related limits which must be monitored
NA

Personal protection equipment
Application / use of adequate (oil resistant) hand and body protection is to be imposed when long time exposure is to be expected or in case of operator-specific requirements. Wear safety goggles if risk of spraying of oil exists

Respiratory protection
Respiratory protection could be imposed / advised when oil mist escapes as product is pressurised

Skin protection
In the event of extended exposure to skin and in case of specific employee requirements

Other Protection

09 = PHYSICAL AND CHEMICAL CHARACTERISTICS

Applies to : DAMPER OIL CONTAINED IN PRODUCT
Physical State Color - Smell - Odor
Prevent damper oil from coming into contact with skin. Immediately remove contaminated clothing and dispose off or clean adequately

| <i>Change in physical state</i> | | <i>Method</i> |
|---|---|-------------------|
| <i>Melting point or range</i> | Not defined (indication for -45 °C) | |
| <i>Boiling point or range</i> | | |
| <i>Density</i> | 0.84 g/ccm at 15 °C | DIN 51 757 |
| <i>Vapour pressure</i> | < 0.1 bar | |
| <i>Viscosity</i> | 12 mm²/ s kinematic | |
| <i>Solvent separation test</i> | | |
| <i>Solids content</i> | | |
| <i>Solubility</i> | Virtually insoluble in water, difficult to mix | |
| <i>pH value</i> | not applicable | |
| <i>Flashpoint</i> | 140 oC | ISO 2592 |
| <i>Ignition temperature</i> | Not self igniting | |
| <i>Explosion limit in air</i> | Lower 0.6% | |
| | Upper 6.5% | |
| <i>Thermal decomposition</i> | Expected above 360 oC | |
| <i>Dangerous reactions when in contact with</i> | Potential reaction with strong oxidizers | |
| | | |

10 = STABILITY AND REACTIVITY

Applies to : DAMPER OIL CONTAINED IN PRODUCT
Conditions to avoid
Damper oil is stable under normal conditions and if used as specified

Substances to avoid
Avoid contact with strong oxidizers

Hazardous decomposition products
Product does not decompose under normal conditions. Decomposition products ico fire (extreme temperature conditions) can be considered non-hazardous under normal conditions

Additional information
NA

11 = TOXICOLOGICAL INFORMATION

Applies to : DAMPER OIL CONTAINED IN PRODUCT
LD50, oral - rats
> 5000 mg/kg

LD50, dermal - rabbits
> 3000 mg/kg

12 = ECOLOGICAL INFORMATION

Applies to : COMPLETE PRODUCT
Elimination details (persistence and degradability)
Apply disposal procedure (separate document). In summary = drain oil, separate other components if needed, recycle or dispose each in an appropriate way according to local legislation. Oil is not completely biodegradable

Eco-toxically effect
Further information on ecological effect : WGK2, water-hazard.

Additional Information
For Germany = Water Endangering Class 1 (self assessment) : slightly hazardous

13 = DISPOSAL INFORMATION

Applies to : COMPLETE PRODUCT
Seperating methodology
Apply disposal procedure (separate document). Seperate components or materials using adequate processes and handling techniques to minimize overall environmental impact. Majority of product can be recycled through steel scrap recycling systems. Do not re-use product at end of life

| <i>Materials Used</i> | <i>Code</i> | <i>Name</i> |
|-----------------------|-------------|---------------------------------|
| Mineral oil | 130113 | Other waste oil / Hydraulic oil |
| Nitrogen | | Nitrogen |
| Steel Parts | 160117 | Steel Scrap |
| Plastic Parts | 160119 | Plastic and Rubber Waste |
| Aluminum Parts | 160118 | Aluminum Scrap |
| Packing Materials | 160118 | Packing Materials |

14 = TRANSPORT REGULATIONS**Applies to : COMPLETE PRODUCT***Elimination details (persistence and degradability)***Products properly packed, securely attached and protected from exposure from the elements. Impact protection should be installed whenever needed****Land transport** (road/rail, national and international)

| | | | | | |
|------------------------|--|------------|----|-----------|------|
| GGVSE/ADR/RID | Class 2 | Class-Code | 6A | | |
| Warning sign | | Hazard no | | UN number | 3164 |
| Description of goods | Articles , pressurized, pneumatic or hydraulic, containing non-flammable gas | | | | |
| Net Explosive Quantity | Not applicable | | | | |

Transport by Inland waterways

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|------------------------|--|------------|----|-----------|------|
| ADN/ADNR | Class 2 | Class-Code | 6A | | |
| Warning sign | | Hazard no | | UN number | 3164 |
| Description of goods | Articles , pressurized, pneumatic or hydraulic, containing non-flammable gas | | | | |
| Net Explosive Quantity | Not applicable | | | | |

Ocean-going ship transport

| | | | | | |
|------------------------|--|------------|--|-----------|------|
| IMDG/GGVSeeClass | Class 2.2 | Class-Code | | | |
| Warning sign | | Hazard no | | UN number | 3164 |
| Marine pollutant | No | | | | |
| Proper Shipping Name | Articles , pressurized, pneumatic or hydraulic, containing non-flammable gas | | | | |
| Net Explosive Quantity | Not applicable | | | | |

Air transport

| | | | | | |
|------------------------|--|------------|--|-----------|------|
| ICAO / IATA | Class 2 | Class-Code | | | |
| Warning sign | | Hazard no | | UN number | 3164 |
| Description of goods | Articles , pressurized, pneumatic or hydraulic, containing non-flammable gas | | | | |
| Net Explosive Quantity | Not applicable | | | | |

Post transport

| | | | | | |
|----------------------|--|--|--|--|--|
| Description of goods | Articles , pressurized, pneumatic or hydraulic, containing non-flammable gas | | | | |
| | Suited for national general postal distribution compliant regulation No. 283 and 594 ADR/RID | | | | |
| | Suited for airmail, national / international | | | | |

15 = REGULATIONS

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| <p>Applies to : DAMPER OIL CONTAINED IN PRODUCT <i>Certification according to EU guidelines</i></p> <p><i>Hazardous substance regulations dated 26.10.1993</i> Reference damper oil</p> |
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National regulations

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|---|----------------------------|
| <i>Classification according to VBF</i> | No |
| <i>Technical instructions - AIR (TA-Luft)</i> | Class 3 |
| <i>Water balance law</i> | WGK 2, water hazard |
| <i>Employment restrictions</i> | None |
| <i>Incident regulations</i> | |

16 = MISCELLANEOUS

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| <p>Applies to : DAMPER OIL CONTAINED IN PRODUCT <i>Tolerance values from the professional institute for health and safety at work</i> <i>Aerosol Concentrations = 5 mg/m³</i> <i>Vapour & Aerosol Concentrations = 20 mg/m³</i></p> <p><i>General precautions</i> The standard safety measures for handling mineral oil products must be followed.</p> |
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17 = DISCLAIMER

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| <p>As no legal duty exists for the provider of this document to declare or publish the data contained in this document, this data shall be considered for information only. As this document was provided only on voluntary bases and has been completed to the best of our knowledge at the time of revision, it does not guarantee any retention of particular properties related to any of the provided information and this within the meaning of a legal obligation of any kind</p> |
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