MATERIAL SAFETY DATA SHEET

Identification of the substance: Common name: Vacuum hose for ROS and OS machines
Intended purpose: Dust extraction hose for ROS and OS machines

Company identification: KWH Mirka Ltd
Pensalavägen 210
66850 Jeppo
Finland
Phone: +358 20 760 2111
Fax: +358 20 760 2290

Date of issue: 19.04.2005    Code: 8993006711, 8993306711

1 IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

2 COMPOSITION/INFORMATION ON INGREDIENTS

This product is not hazardous as defined in 29 CFR1910.1200

3 HAZARDS

POTENTIAL HEALT EFFECTS

Eye contact: Particulates may scratch eye surfaces/cause mechanical irritation.

Skin contact: Negligible hazard at ambient temperatures (-18 to +38°C; 0 to 100°F). Exposure to hot material may cause thermal burns.

Inhalation: Negligible hazard at ambient temperatures (-18 to +38°C; 0 to 100°F). Vapors and/or aerosols which may be formed at elevated temperatures may be irritation to eyes and respiratory tract.

Ingestion: Minimal toxicity.

4 FIRST AID MEASURES

Eye contact: This product is an inert solid. If in eye, remove as one.

Skin contact: For hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze and get prompt medical attention. No attempt should be made to remove material from skin or to remove contaminated clothing, as the damaged flesh can be easily torn.

Inhalation: In case of adverse exposure to vapors and/or aerosols formed at elevated temperatures, immediately remove the affected victim from exposure. Call for prompt medical attention.

Ingestion: First aid is normally not required.

5 FIRE FIGHTING MEASURES

Flash Point: 343°C/649°F. Note: Estimated; Greater than.
Flammable Limits: Not applicable.
Auto ignition Temp.: Not applicable.
General Hazard: Solid material, may burn at or above flashpoint, and airborne dust may explode if ignited. Toxic gases will form upon combustion. Static Discharge, material can accumulate static charges which can cause an incendiary electrical discharge.

Fire Fighting: Use water spray to cool fire exposed surfaces, protect personnel, and extinguish the fire. Respiratory and eye protection required for fire fighting personnel.

Decomposition products under fire conditions: Oxygen-lean conditions may produce monoxide and irritation smote. Acetic acid.

6 ACCIDENTAL RELEASE MEASURES

Land spill: Recover spilled material and place in suitable containers for recycle or disposal. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

Water spill: Plastic pellets are defined by the US EPA under the Clean Water Act (40CFR122.26) as a “significant material” which requires any industrial plant that may expose pellets to storm water to secure a storm water permit. Violations of the rule carry the same penalties as other Clean Water Act violations. Pellets found in storm water runoff are subject to EPA regulations with the potential for substantial fines and penalties. Skim from surface. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations. Recover the spilled material and place in suitable containers for recycle or disposal.

7 HANDLING AND STORAGE

Electrostatic accumulation hazard: Yes, use proper bonding and/or grounding procedure.

Storage temperature: Ambient.

Loading/Unloading temperature: Ambient.

Storage/Transport pressure: Atmospheric.

Loading/Unloading viscosity: Solid.

Storage and handling: Keep container closed. Handle and open containers with care. Store in a cool, well ventilated place away from incompatible materials. Do NOT handle or store near open flame, heat or other sources of ignition. Protect material from direct sunlight. Material will accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures.

8 EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure controls: Local exhaust ventilation of process equipment may be needed to control particulate exposures to below the recommended exposure limit. See personal protection recommendations.

Personal Protection: Where contact may occur with hot material, wear thermal resistant gloves, arm protection, and a face shield. Where contact is likely with open systems at ambient temperatures (~ -18°C to 38°C, O°F to 100°F), wear safety glasses with side shields.
Workplace exposure guidelines:

OSHA REGULATION 29FR1910.1000 REQUIRES THE FOLLOWING PERMISSIBLE EXPOSURE LIMITS:

5 mg/m³ (respirable dust), and 15 mg/m³ (total dust) based on the OSHA.

The recommended permissible exposure levels indicated above reflect the levels revised by OSHA in 1989 or in subsequent regulatory activity. Although the 1989 levels have since been vacated by the 11th Circuit Court of Appeals, KWH Mirka Ltd recommends that the lower exposure levels be observed as reasonable worker protection.

THE ACGIH RECOMMENDS THE FOLLOWING THRESHOLD LIMIT VALUES:

A TWA of 10 mg/m³ for inhalable particulate (total dust) and a TWA of 3 mg/m³ for respirable particulate (total dust) for Particulates Not Otherwise Classified (PNOC).

9 PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific gravity at ° F:</td>
<td>0.91 - .96</td>
</tr>
<tr>
<td>Vapor pressure, mmHg at ° F:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility in water, wt. % at ° F:</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Viscosity of liquid, cST at ° F:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Sp. grav. of vapor, at 1 atm (Air = 1):</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing/melting point, ° F:</td>
<td>210 to 240 (99 to 115 C)</td>
</tr>
<tr>
<td>Evaporation rate, n-Bu Acetate = 1:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point, ° F:</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

10 STABILITY AND REACTIVITY

Stability: Stable.

Condition to avoid instability: Not applicable.

Hazardous polymerization: Will not occur.

Conditions to avoid hazardous polymerization: Not applicable.

Material and conditions to avoid incompatibility: Temperatures above 300° F (150° C) with Fluorine.

Hazardous decomposition Products: Not applicable.

11 TOXICOLOGICAL INFORMATION

Please refer to Section 3 for available information on potential health effects.

12 ECOLOGICAL INFORMATION

No specific ecological data are available for this product. Please refer to Section 6 for information regarding accidental releases and Section 15 for regulatory reporting information.

13 DISPOSAL CONSIDERATION

Please refer to Section 5, 6 and 15 for disposal and regulatory information.
14 TRANSPORTATION INFORMATION

Department of transportation (DOT):
This product is not DOT regulated.

15 REGULATORY INFORMATION

TSCA:
This product is listed on the TSCA Inventory at CAS Registry Number 24937-78-8.

CERCLA:
This product is accidentally spilled, it is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act. We recommend you contact local authorities to determine if there may be other local reporting requirements.

SARA TITLE III:
Under the provision of Title III, Sections 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the Not Hazardous. This product does not contain Section 313 Reportable Ingredients.

16 OTHER INFORMATION

NOTES:
The CAS Registry No. for ethylene-vinyl acetate copolymer is 24937-78-8. Representative grades include:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade</th>
<th>Grade</th>
<th>Grade</th>
<th>Grade</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD-318</td>
<td>LD-701</td>
<td>LD-706</td>
<td>LD-713</td>
<td>LD-722</td>
<td>LD-728</td>
</tr>
<tr>
<td>LD-319</td>
<td>LD-702</td>
<td>LD-708</td>
<td>LD-720</td>
<td>LD-723</td>
<td>LD-730</td>
</tr>
<tr>
<td>LD-409</td>
<td>LD-705</td>
<td>LD-712</td>
<td>LD-721</td>
<td>LD-725</td>
<td>LD-734</td>
</tr>
<tr>
<td>UL7505</td>
<td>UL7520</td>
<td>UL7560</td>
<td>UL7620</td>
<td>MV02514</td>
<td></td>
</tr>
</tbody>
</table>


Avoid accumulation of dust or dust clouds; operate handling and storage systems leak free, practice good housekeeping.

Keep from sources of ignition. Do not store near heat, flame, or strong oxidants.

Assure proper electrical grounding of all handling equipment.

For more information see “Guide for Handling and Storage of ESCORENE Polyethylene Resins.”

Product may also contain varying levels of additives, such as slip and antiblocking agents, antioxidants, stabilizers, and corrosion inhibitors. Certain grades may contain cristobalite, a form of crystalline silica, as an additive that is encapsulated in the polymer. Inhaled crystalline silica in an occupational environment has been classified as a Group 1 human carcinogen by the International Agency for Research on Cancer. However, KWH Mirka Ltd has assessed the potential for release of silica to the air when this polymer is handled and has determined that silica encapsulated in this polymer is not expected to pose a health hazard when processed under normal conditions of use.

SPECIAL PRECAUTIONS:
Should significant vapors/fumes be generated during thermal processing of this product, it is recommended that work stations be monitored for the presence of thermal degradation by-products, vinyl acetate and acetic acid which may evolve at elevated temperatures. It is recommended that the current ACGIH-TLVs for these materials be observed. Contact your Mirka representative for further information.

HAZARD RATING SYSTEMS:
This information is for people trained in:
National Paint & Coatings Association’s (NPCA) Hazardous Materials Identification System (HMIS)
National Fire Protection Association (NFPA 704) Identification of the Fire Hazards of Materials
NPCA-HMIS  NFPA 704  KEY

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>1</th>
<th>1</th>
<th>4 = Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAMMABILITY</td>
<td>1</td>
<td>1</td>
<td>3 = Serious</td>
</tr>
<tr>
<td>REACTIVITY</td>
<td>0</td>
<td>0</td>
<td>2 = Moderate</td>
</tr>
</tbody>
</table>

CAUTION: HMIS ratings are based on a 0 – 4 rating scale with 1 representing minimal hazards or risks, and 4 representing significant hazards or risks. Recommended HMIS ratings should not be used in the absence of a fully implemented HMIS hazard communication program.

Revision Summary: Since October 3, 2003 this MSDS has been revised in Section(s):

REFERENCE NUMBER: HDHA-K-90304
SUPERSEDES ISSUE DATE: October 3, 2003

Document Group Number: 4401792KUS

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the users responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability or any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.