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Scope:

To assess the environmental impact of the materials & chemicals used in the production process.


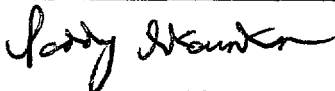
Responsibility:

The Environmental Manager is responsible for ensuring that the impact on the environment of materials & chemicals are established.


The environmental impact of the products used in the production process are mitigated by the waste management procedures that are in place. These practices ensure that all materials used are disposed of in a controlled manner ref. EP 6.1 Waste Management. Environmental effects of each product is established by means of the MSDS for that product. A copy of the MSDS is included as an addendum to this procedure with full details – see full list below of attached MSDS's.

Addenda to this EP: MSDS Sheets indicated below-

| Welding | | | |
|--|--|--|---|
| Product | Main Constituent | Purpose | Manf'r. |
| Avesta MSDS Stainless solid steel welding wire | Cr, Ni, Mn, Fe | Welding filler wire for TIG & MIG welding | AvestaPolarit Welding AB, Avesta Sweden |
| Avesta MSDS Stainless steel covered electrodes for MMA welding | Core wire; Cr, Ni, Fe Flux coating; Cr, Ni, Mn, Fluorides, Limestone, Al2O3, TiO2 | MMA consumable | AvestaPolarit Welding AB, Avesta Sweden |
| Avesta MSDS Stainless steel flux cored wire | Strip; Cr, Ni, Fe Core; Cr, Ni, Mo, Mn, Limestone, Al2O3, TiO2 | Welding filler wire for MIG welding | AvestaPolarit Welding AB, Avesta Sweden |
| Avesta MSDS P5 AC/DC Covered electrodes | Molybdenum alloyed electrode. | Dissimilar welding of low alloy to stainless steel | AvestaPolarit Welding AB, Avesta Sweden |
| Anti-spatter Fluid | Oleic glyceride, linoleic glyceride, palmitic glyceride, stearic glyceride, behenic glyceride, lignoceric glyceride, arachidil glyceride | Anti-spatter spray for MMA/MIG welding | ABICOR Binzel Frederick MD USA |

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| Prepared By: Damian Moylan Environmental Manager | Approved By Manager: Paddy Staunton Managing Director GENERAL MANAGER |
| Signed:  | Signed:  |
| Date: 18/02/05 | Date: 10/03/06 |

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Pickling & Passivation

| Product | Main Constituent | Purpose | Manfr. |
|------------------------------------|--|---------------------------------|--|
| Avesta MSDS Pickling paste/spray | Nitric acid HN03 Sulphuric acid H2SO4 Hydrofluoric acid HF | Cleaning & passivation of welds | AvestaPolarit Welding AB Chemical Products, Malmo Sweden |
| Avesta MSDS First aid spray 910 | No hazardous components. Active ingredient: Hexafluorine | Neutralize acid burns | AvestaPolarit Welding AB Chemical Products, Malmo Sweden |
| Avesta MSDS Neutralizing agent 502 | Sodium Hydroxide NaOH | Neutralizing process wash water | AvestaPolarit Welding AB Chemical Products, Malmo Sweden |

Cleaning

| Product | Main Constituent | Purpose | Manfr. |
|--|--|--|--|
| CleanOne 401 | Phosphoric acid H3PO4 | Cleaning fluid for removing stains | AvestaPolarit Welding AB Chemical Products, Malmo Sweden |
| 70% IPA Solution | Isopropyl Alcohol (70%) in water | Cleaning fluid for removing stains | Fluid Technology Durham England |
| Antox 90E | Nitric acid HN03 (1025%) | De-greaser to remove oil/grease stains | Elmer Wallace Plansee Ltd. Glasgow Scotland |
| Antox 90E | Nitric acid HN03 (3550%) | De-greaser to remove oil/grease stains | Oakite (Europe) GmbH Wiesbaden Germany |
| Steel Sheen | Mineral spirits | Stainless steel polish | O.B. Hygiene Glanmire Cork |
| Superior high shine stainless steel cleaner & polish (aerosol) | Petroleum distillate, propane, isobutane | Stainless steel polish | Spartan Chemical Co. |
| Tangit KS Cleanser | Ethanol, butanone | Cleaner for plastic pipes | Henkel Adhesives Cheshire UK |
| Tangit Cleanser PVC-U/C ABS | Acetone, butanone | Cleanser for applying before adhesive to plastic pipes | Henkel Adhesives Cheshire UK |
| Griffon Cleaner | Methyl ethyl ketone | Cleaning agent | Bison International Goes NL |
| Isopropyl Alcohol 70% | Isopropyl Alcohol 70% | Cleaning agent | Medi-kleen Limerick, FTG Ltd. Durham UK |
| Premier WFI Klercide, Premier Klercide, Kleralcohol IPA | 70% propan-2-ol | Cleaning agent | AGB Scientific Ltd. Dublin |

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| Oils & Lubricants | | | |
|------------------------------|--------------------------|---|--|
| Product | Main Constituent | Purpose | Manf'r. |
| Cutting Oil (Mineral Oil) | No hazardous components, | Lubricant for metal cutting & thread forming / drilling | Rigid Tool U.K. Letchworth Herts U.K. |
| Rocol RTD Liquid - Ultracut | No hazardous components. | Lubricant for metal cutting & thread forming / drilling | ITW Polymers and fluids Pty Ltd. NSW Australia |
| Hi-Temp Bearing Lube | No hazardous components. | Lubricant | STL Compound Corp. Illinois USA |
| | | | |

| Dye Penetrant Testing Chemicals | | | |
|---|--|---|------------------------------------|
| Product | Main Constituent | Purpose | Manf'r. |
| Visible Red Dye JAC | Low Sulphur Hydrocarbon <70% Mineral oil <20% Propellant CO2 | Penetrant for weld testmg | Johnson & Allen Ltd., Sheffield UK |
| Developer JAD & JAD-SHF | Methylene Chloride Propellant CO2 | Developer to indicate weld surface cracks | Johnson & Allen Ltd., Sheffield UK |
| Dye Penetrant Remover JAC-2 & JAC-2-SHF | Synthetic Hydrocarbons Propellant Dimethyl ether (DME) | Cleaner to remove penetrant & developer | Johnson & Allen Ltd., Sheffield UK |

| Paints, Primers, Coatings, Hardeners | | | |
|--|--|-------------------|------------------------------------|
| Product | Main Constituent | Purpose | Manf'r. |
| H71 Air Drying Hammer Finish | Not specified | decorative finish | Trimite Truecoat Ltd., Co. Kildare |
| HarTop AS (polyurethane Topcoat) | Polyurethane | coating | Jotun Paints Ltd. Cork |
| Jotamastic 87 Aluminium (Epoxy mastic coating) | Epoxy | coating | Jotun Paints Ltd. Cork |
| Hardener 008 5600 (Reacolour/Reapox GPL-S) | Xylene, 1-methoxy, 2-propanol, n-butanol | hardener | Tikkurila Services Oy Finland |
| TemaPrime Eur (former Tema Primer Eur) | Xylene, Aromatic hydrocarbon solvent, Isobutanol | primer | Tikkurila Services Oy Finland |
| TemaDur Hardener 008 7590 (Readur hardener) | Xylene, 2-methoxy-1-methyl acetate, butyl acetate, hexamethylene-1,6 di-isocyanate (HDI), isocyanate resin | hardener | Tikkurila Services Oy Finland |

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| Temacoat GPL Hardener (Reapox GPL hardener) | Xylene, Isobutanol, Amine adduct, Trimethyl hexamethylene diamine, 2,4,6-tris-(dimethyl aminomethyl)-phenol | <i>hardener</i> | Tikkurila Services Oy Finland |
| Temacoat GPL-S Primer (Reapox GPL-S primer) | Xylene, Epoxy resin, aromatic hydrocarbon solvent, 1-methoxy-2-propanol | <i>primer</i> | Tikkurila Services Oy Finland |
| Temathane PLS [HS] - Activator | N-butyl acetate, hexamethylene diisocyanate [212-485-8], hexamethylene diisocyanate oligomers, aromatic hydrocarbon solvent [c9-c10][265-199-0], Isocyanate (incl. Polymer & monomer) | <i>activator for polyurethane finish</i> | Tikkurila Coatings Ltd. West Bromwich UK |
| Temathane PLS [HS] - urethane | Xylene mix of isomers [215-535-7], Ethyl benzene [202-849-4], 2-methoxy-1-methylethyl-acetate [203-603-9], aromatic hydrocarbon solvent c9-c10[265-199-0] | <i>polyurethane finish</i> | Tikkurila Coatings Ltd. Lancs. UK |
| Temathane PLV/PLS - Clear Activator | Xylene mixture of isomers, 2-methyl-1-methylethyl acetate, hexamethylene diisocyanate, alkyl (c7) acetates | <i>activator for polyurethane finish</i> | Tikkurila Coatings Ltd. Lancs. UK |
| Temathane PLV 102.white - urethane | 2-methoxy-1-methylethyl acetate, aromatic hydrocarbon solvent c9-c10 | <i>polyurethane finish</i> | Tikkurila Coatings Ltd. Lancs. UK |
| Temathane PLV Series tinted range | 2-methoxy-1-methylethyl acetate [203-603-9], aromatic hydrocarbon solvent c9-c10[265-199-0] | <i>urethane coating for metal substrate</i> | Tikkurila Coatings Ltd. Lancs. UK |
| Temathane PLV Activator DTP16 s | Xylene mixture of isomers [215-535-7], 2-butoxyethyl acetate [203-933-3], 2-methoxy-1-methylethyl acetate [203-603-9], hexamethylene diisocyanate [212-485-8], isocyanate (incl polymer & free monomer) | <i>activator for polyurethane finish</i> | Tikkurila Coatings Ltd. Lancs. UK |
| Temafloor Non-Slip Bauxite-No.1 (medium) | Not specified. | <i>Aggregate for non-slip flooring applications</i> | Tikkurila Coatings Ltd. West Bromwich UK |
| Amercoat 71 Cure | Polyaminoamide, xylene, 2-methylpropan-1-ol, ethylbenzene | <i>Polyamide cured epoxy coating (cure component)</i> | Ameron International UK |
| Sigmacover 256/435/456/522 (sigmacover CM MIO/coating/primer/sigmaCM MIO coating/sigmarite sealer/hardener) | Polyamide epoxy adduct, xylene, iso-butanol, ethylbenzene, 2,4,6-tris-(dimethylaminomethyl)-phenol | <i>Primer</i> | Sigma Coatings Uithoorn NL |

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| Adhesives, Plastic Compound, Sealers | | | |
|--|---|--|--|
| Product | Main Constituent | Purpose | Manf'r. |
| Langit all pressure/PVC-U special adhesive | Tetrahydrofuran, butanone, cyclohexanone | PVC adhesive | Henkel Cheshire UK |
| Langit DyTex Cement | Dichloromethane | Plastic pipe compound | Henkel Cheshire UK |
| Langit ABS Special Adhesive | Butanone, butyl acetate | ABS compound | Henkel Cheshire UK |
| Langit PVC-C Special Adhesive | Tetrahydrofuran, butanone, cyclohexanone, di-n-octyltinbis, ethylhexylmercaptoacetate | PVC-C compound | Henkel Cheshire UK |
| Rocol Foliac Manganese Pipe Joining Compound | No hazardous components | Pipe joining compound | Rocol Ltd. Leeds UK |
| Weld-On 719 for PVC Plastic Pipe | Polyvinyl chloride resin, tetrahydrofuran, methyl ethyl ketone (butanone), cyclohexanone | PVC compound | IPS Ltd Co. Durham UK |
| Gritton B 25 | 78-93-3 Methyl ethyl ketone | Adhesive | Bison International Goes NL |
| Indenden General Purpose Adhesive 1 O-88 | Not specified | Bonds all types of thermal insulation incl. expanding polystyrene to steel | Bostik Findley Ltd. Stafford UK |
| Loctite 7386 Solvent Based Surface Activator | n-heptane 142-82-5, aldehyde-amine condensate 34562-31-7, isopropyl alcohol 67-63-0 | Activator for adhesive | Loctite (Ireland) Ltd. Dublin |
| Bitumen Mastic | Bitumen | Rooting sealer | Laybond Products Ltd. Chester UK |
| Armaflex Adhesive 520 | Propan-2-ol, acetone, cyclohexane, ethyl acetate, hexane mixture of isomers containing max. 5% n-hexane, ethyl methyl ketone, heptane, hexane mixture of isomers containing more than 5% n-hexane | Adhesive | Armacell GmbH Bjornemyr Norway |
| Chill-Bond CP99 Adhesive | Mixed Xylenes | Adhesive | Kingspan Industrial Insulation Derbyshire UK |
| Pittseal 444 Sealant | Petroleum distillate (cas 8030-30-6) | Sealant | Customized Insulation Dublin |
| Foster 30-45 | Kaolin clay, aliphatic petroleum distillate, calcium carbonate, crystalline silica, mica, amorphous silica, silica-amorphous-gel-and precipitated, cobalt compounds | Formseal Sealant | Foster Products Corp. Oakdale MN USA |

Legend:

EPA = Environmental Protection Agency
MSDS = Material Safety Data Sheets
MMA = Manual Metal Arc welding
MIG = Metal Inert Gas Welding
TIG = Tungsten Inert Gas Welding

Reference Documents:

EPA License No.283 §11
EP 6.1 Waste Management
ISO 14001: 2004 4.3. 1 Environmental aspects

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