Durapipe - S&LP
Safety in Storage Handling and Usage
COSHH

Farnell Part Number 7196532/Durapipe Code Number 03 463 395 - MEK Cleaner

Farnell Part Number 7196544/Durapipe Code Number 03 462 395 - PVC-U Solvent Cement.

Introduction

This information covers the following areas listed below and is applicable to *all* pipes and fittings being supplied to Farnell. The COSHH information is specific to the *two* products listed above:

Storage
Fire Risks
Handling
Usage
Jointing
Testing
COSHH Regulations

STORAGE

Solvent Cements and Cleaner

Fire Risks
Solvent cements and cleaner are highly flammable and must be stored in accordance with safe practices for such substances.

In the event of fire of solvent cement or cleaner, either use a carbon dioxide, dry powder, foam or vaporising liquid extinguisher. DO NOT USE WATER JETS.

Avoid the products of combustion. In a serious fire, breathing apparatus must be used.

Storage Site
All solvent cements must be stored in a ventilated building at reasonable temperatures i.e. preferably between 10°C and 25°C (55°F and 77°F), and away from damp or wet environments.

The storage of solvent cements should be restricted to NO SMOKING areas since vapours given off can be converted to toxic pyrolysis products by a burning cigarette.

Pipe and Fittings

Fire Risks

PVC-U is classified as not supporting combustion, but will burn fiercely in a major fire with release of hydrogen chloride gas which is harmful if inhaled.

When tested in accordance with BS 476 Part 7 (1971), Surface Spread of Flame Test, the materials are classified as follows:-

PVC-U-Class 1-Lowest Flame Spread Category.

Storage Site

A combination of direct sunlight and excess heat can degrade thermoplastics and should be avoided.

The storage site of pipes should be flat, level and free from sharp stones etc.

Pipes should not be stacked to heights exceeding the following:

Pipe Size	*Maximum Stacking Height*
Up to 3in or 90mm	20 x pipe size

Side bracing must be provided to prevent stack collapse.

Pipes must not be subjected to excess of temperature variation within the stack and localised heat sources must be avoided i.e. boilers, radiators, oil burners etc.

HANDLING

Localised cuts, deep scratches or grooves may lead to subsequent fracture of the pipework and must be avoided.

The following precautions should be taken:-

i) Pipes should not be dragged across the ground.
ii) Pipes should be protected when lifting with chains or wire ropes. Webbing slings should preferably be used.
iii) Pipes should not be dropped or thrown off lorries.
iv) Pipe ends should not be dropped on the ground.
v) Fittings should not be thrown on to hard surfaces.
vi) When transporting pipes, care should be taken to avoid damage by contact with coping irons, exposed nails, or other sharp corners on the deck of the lorry or trailer.
vii) Pipes must be prevented from moving during transportation.
viii) Inspection of components immediately before installation must be made to ensure that damage has not been sustained due to careless handling.

USAGE

Selection and Applications

Durapipe - S&LP technical literature given recommendations for specific applications which are the result of extensive testing.

It is emphasised, however, that variations from recommended operating parameters may affect performance and invalidate recommendations.

Plastics soften with increasing temperature and chemical resistance may also be reduced. Particular care should be taken to ensure that pipes are not subjected to temperatures in excess of those considered when materials were specified.

In certain circumstances PVC-U may display brittleness, particularly at low temperatures. A brittle failure may propagate causing a total loss of pipe contents, resulting in serious damage or injury depending on contents.

Under no circumstances should PVC-U be used for compressed air or gases.

Design and Installation

Durapipe - S&LP Technical Brochures give detailed advice on design and installation of Durapipe - S&LP thermoplastic pipe systems.

Departure from these recommendations can seriously reduce the working life of the pipework.

Static Electricity

Attention is drawn to the build up of static electricity which may occur in all plastic pipes when conveying dry powders. This can result in electric shock and in severe cases fire or explosion.

JOINTING

Procedure

Failure of badly made joints can lead to serious injury if pipes are carrying hazardous solutions or if failure leads to sudden releases of energy such as in a compressed air or gas system.

The correct jointing procedure must be followed as described in detail in Durapipe - S&LP Technical Brochures and Installers Pocket Books.

Use of Solvents

Solvent cements and cleaner contain volatile solvents and will liberate narcotic vapours. Cans must be sealed when not in use. Direct inhalation must be avoided and solvent cements and cleaner must not be used in confined spaces without adequate ventilation, or without suitable breathing apparatus being worn.

Smoking, or the use of naked flames in the vicinity of solvent cements or cleaner must be prohibited even in ventilated areas.

Prolonged contact with sensitive skin may cause irritation. Barrier creams or protective gloves will offer protection against this. Solvent cements and cleaner can be injurious if splashed into the eye.

TESTING

When pipe systems are required to carry dangerous fluids, pressure testing of the completed system must be carried out before commissioning.

Recommendations for testing are given in the relevant Durapipe - S&LP Technical Brochure.

Particular care must be taken to vent all air before raising pressure. Failure to do so when testing PVC-U can result in dangerous fragmentation, should failure occur.

COSHH REGULATIONS

The basic requirements of the COSHH Regulations may be summarised as follows:

1. Assess the health risk arising and the precautions necessary.

2. Introduce suitable measures to prevent and control the risk.

3. Ensure these measures are observed and any equipment used is properly maintained.

4. Where necessary, monitor the exposure of workers and carry out and appropriate form of surveillance of their health.

5. Inform, instruct and train employees about the risks and the precautions to be taken.

For Durapipe - S&LP materials, risk of exposure to hazardous substances may occur from fire during storage or when constructing joints during installation of pipework. Whilst the potential hazard is very low, it must nevertheless be considered.

GENERAL COMPOSITION OF DURAPIPE - S&LP

PVC-U Pipe, Fittings and Valves
PVC resin with process aids and a tin based stabiliser.

PVC-U Solvent Cement
PVC resin dispersed in Tetrahydrofuran, other organic solvents and a thixotropic agent.

MEK Cleaner
Methyl Ethyl Ketone

PVC-U SOLVENT CEMENT

General

Product Name:	Durapipe PVC-U Solvent Cement
Product Reference Number:	03 462 395/6
Manufacturer's name and address:	Durapipe - S&LP Norton Canes Cannock Staffs. WS11 3NS
Telephone number for further information:	01543 279909
Manufacturer's intended usage:	Solvent cement jointing of PVC pipework.
Packing:	½ litre and 1 litre cans.
Constituents:	PVC resin, Tetrahydrofuran, Cyclohexanone and Thixotropic Agent.
Shelf life:	12 months minimum

Physical Data

Boiling Point:	65°C
Vapour pressure:	176mm Mercury at 25°C
Vapour density:	1.35 at 20°C, 2.5 at boiling point.
Specific gravity:	0.92
Solubility in Water:	Immiscible
Appearance:	Clear gel - strong smell.

Fire and Explosion Hazard Data

Auto ignition Temperature:	321°C
Flash Point:	-17°C (closed cup method)
Flammability Limits:	LEL 2.3% volume in air UEL 11.8% volume in air
Extinguishing Media:	Carbon Dioxide and Dry Powder
Unusual Fire Hazards:	It can react with oxidising materials. Breathing apparatus should be used in a serious fire - hazardous decomposition products.

Health Hazard Data
Occupational exposure limit for solvent(s) 200ppm TLV in air.

Effect of Exposure

Skin:	Liquid dries skin. Prolonged exposure may cause dermatitis.
Eyes:	Liquid causes eye damage. Excess vapour may cause irritation.
Inhalation:	Strong narcotic. May cause dizziness and nausea.
Ingestion:	Acute toxicity by mouth. Can cause gastric damage.

Reactivity Data

Stability:	Stable
Conditions to avoid:	Cans should be closed when not in use. No smoking in area.
Materials to avoid:	Oxidising materials.
Hazardous decomposition products in fire:	Yes
Hazardous polymerization:	No

Handling Advice

When making joints	Avoid direct inhalation of fumes. Use in a well ventilated area. No smoking or naked flames.
Protective clothing:	Not normally considered necessary. Polythene gloves or barrier cream may be used if desired.
Spill or leak:	Wipe up immediately. Ventilate area.
Waste disposal:	As for toxic/flammable liquids or, allow to evaporate in a safe place. No hazard from solid residue.

Transportation Data

IMCO Class:	3.2
UN Number:	1133 (Adhesive)
Page:	3174
Flash Point:	-9°C
CEFIG Tremcard Number:	CEFIC TEC (R) -30 G 30 Class 3 ADR.

MEK CLEANER

General

Product Name:	Durapipe MEK Cleaner
Product Reference Number:	03 463 395
Manufacturer's name and address:	Durapipe - S&LP Norton Canes Cannock Staffs. WS11 3NS
Telephone number for further information:	01543 279909
Manufacturer's intended usage:	Degreasing/cleaning of pipes and fittings prior to Solvent cement jointing and socket fusion welding.
Packing:	½ litre cans.
Constituents:	Methyl Ethyl Ketone (Butanone)
Shelf life:	Does not deteriorate. New or part used tins of MEK can be stored until required.

Physical Data

Boiling Point:	80°C
Vapour pressure:	100mm Mercury at 25°C
Vapour density:	1.18 at 20°C, 2.4 at boiling point.
Specific gravity:	0.804
Solubility in Water:	Miscible
Appearance:	Colourless, transparent liquid.

Fire and Explosion Hazard Data

Auto ignition Temperature:	525.6°C
Flash Point:	-4°C (closed cup method)
Flammability Limits:	LEL 1.8% volume in air UEL 10% volume in air
Extinguishing Media:	Carbon Dioxide and Dry Powder
Unusual Fire Hazards:	It can react with oxidising materials. Breathing apparatus should be used in a serious fire - hazardous decomposition products.

Health Hazard Data

Occupational exposure limit for solvent(s) 200ppm TLV in air.

Effect of Exposure and First Aid

Skin:	Liquid dries skin. Prolonged exposure may cause dermatitis.
Eyes:	Liquid causes eye damage. Excess vapour may cause irritation.
Inhalation:	May cause dizziness and nausea. Rest in fresh air. Seek medical attention.
Ingestion:	May cause gastric damage. Immediately rinse mouth with water. Drink plenty of water. Seek medical attention promptly.

Reactivity Data

Stability:	Stable
Conditions to avoid:	Cans should be closed when not in use. No smoking in area.
Materials to avoid:	Oxidising materials.
Hazardous decomposition products in fire:	Yes
Hazardous polymerization:	No

Handling Advice

When making joints	Avoid direct inhalation of fumes. Use in a well ventilated area. No smoking or naked flames.
Protective clothing:	Not normally considered necessary. Polythene gloves or barrier cream may be used if desired.
Spill or leak:	Wipe up immediately. Ventilate area.
Waste disposal:	As for toxic/flammable liquids or, allow to evaporate in a safe place. No hazard from solid residue.

Transportation Data

	Sea Freight and Air Freight
IMCO Class:	3.2
UN Number:	1193 (MEK)
Page:	3226
Flash Point:	-4°C
CEFIG Tremcard Number:	CEFIC TEC (R) -30 G 30 Class 3 ADR.