MATERIAL SAFETY DATA SHEET

Issued: September 1998

1. * Identification of the Preparation and Company

Product Name:	DUNLOP THIXOFIX ADHESIVE
Product Description:	Non-Drip, Thixotropic Contact Adhesive
Manufacturer/Supplier:	Norcros Adhesives, Longton Road, Trentham, Stoke-on-Trent ST4 8JD Telephone: (01782) 591100

2. Composition/Information on Ingredients

Composition: Polychloroprene based adhesive preparation in petroleum solvent mixture.

Ingredients Classified Under CHIP Regulations[1]

Substance	Concentration	CAS No	Classification
Toluene	45% (max.)	00108-88-3	F; R11 Xn; R20
Petroleum Hydrocarbon Distillate	35% (max.)	64741-84-0	F; R11

3. Hazards Identification

Thixofix contains a highly flammable and harmful petroleum solvent mixture.

Inhalation: Acute effects of over exposure to solvent vapours include mild respiratory tract irritation, light headedness, dizziness, headache, drowsiness lending to unconsciousness on extreme over exposure.

Skin: Frequent/prolonged contact may cause irritation or dermatitis.

Eyes: Splashes in eyes may cause temporary irritation and discomfort.

Ingestion: Nausea and discomfort accentuated by evaporation of solvent with symptoms of solvent vapour over exposure. Serious danger of aspiration into lungs.

4. First Aid Measures

Inhalation: Move from exposure to fresh air. Keep warm and at rest. Do not allow to smoke. Obtain medical advice.

Skin: Wipe off excess and wash with soap and water. Proprietary skin cleansers may help removal from skin - do not use solvents. Obtain medical advice if skin irritation persists.

Eyes: Flush immediately with plenty of water or saline eye wash solution and continue rinsing for ten minutes. Obtain medical advice.

Ingestion: Clear material from mouth and throat and obtain immediate medical attention. Show this data sheet or product label. Do not induce vomiting.

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5. Fire Fighting Measures

Extinguishing Media: Carbon dioxide, chemical powder, foam, water fog. Do not use water jet.

Special Precautions: Cool closed containers in vicinity of fire with water spray. Wear breathing equipment if significant amounts are involved

Combustion Products: Smoke, CO, CO_2, chlorinated polymer combustion and degradation products including hydrochloric acid fumes.

6. Accidental Release Measures

Eliminate sources of ignition and ventilate the area. Absorb with sand or proprietary absorbent and transfer to container for disposal. Prevent entry into drains and sewers. Wear suitable personal protective equipment-see Section 8

7. Handling and Storage

Personal Precautions:

Respiratory: Exposure to solvent vapours should be controlled by general and/or local exhaust ventilation. Where this is not practicable, suitable respirators must be worn.

Skin: Wear suitable gloves if skin contact cannot be avoided

Eyes: Avoid contact.

See Section 8: Exposure Controls and Personal Protection.

Fire Precautions:

Use. The solvent vapours are highly flammable and heavier than air. Keep away from sources of ignition - flames, sparks, hot surfaces, electrical equipment, heating appliances. Extinguish pilot lights. Maintain efficient ventilation/extraction using flame-proof equipment where necessary. Replace container lid firmly after use.

Storage: Store in cool well ventilated place.

Relevant Legislation Refs. 4, 5

8. Exposure Controls/Personal Protection

Occupational Exposure Limits (OEL's)

Substance	8 hr TWA	15 min. STEL	
Petroleum Hydrocarbon Distillate	155 ppm*	not listed	OES
Toluene	50 ppm	150 ppm	OES

* Solvent producers calculated value (< 600 mg.m.$^{-3}$).
OES Occupational Exposure Standard, Ref. HSE Guidance Note EH 40/98.

Guidance Note EH40 is published by the Health and Safety Executive and is updated annually. OEL values are subject to periodical revision and users should check current edition.

Relevant Legislation Ref 2.

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8. Exposure Controls/Personal Protection (Continued)

Personal Protection:

Ventilation: Requirements will be subject to working arrangements and quantities of adhesive used. Local exhaust ventilation is generally most effective at bench level-solvent vapours are heavier than air.

Respiratory Protective Equipment: Half mask respirators fitted with the appropriate A1 or A2 organic vapour cartridge are suitable for general use. Airline or self-contained breathing equipment could be required under extreme conditions and for emergency use. Check suitability with equipment suppliers/manufacturers.

Gloves: Nitrile rubber gloves generally provide good hydrocarbon solvent resistance. Check with supplier/manufacturer.

Eyes: Wear safety spectacles/goggles as appropriate.

Clothes: Wear suitable protective clothing, e.g.; apron and overalls, and launder regularly. Discard heavily contaminated clothing immediately. Do not wear nylon, rayon or other synthetic fibre based or silk outer clothing which may generate static electricity.

Relevant Legislation Refs.2,3
See also HSE publication HS(G)53, Respiratory Protective Equipment-A Practical Guide for Users.

9. Physical and Chemical Properties

Appearance:	Amber coloured gel	
Odour:	Aromatic petroleum	
Solubility in Water:	Insoluble	
pH:	Not applicable	
Relative Density (SG):	0.86	
Viscosity:	Thixotropic	
Flash Point:	Below 0°C Min, -5°C	
VOC Content:	0.68 kg/litre	
Boiling Point:	Petroleum Hydrocarbon 90°C	
	Toluene 110°C	
Explosive Limits (% v/v air):	Petroleum Hydrocarbon	0.9 - 8.0
	Toluene	1.0 - 7.0

10. Stability and Reactivity

No hazardous changes over an indefinite period of normal storage. Solvent evaporation will occur from improperly closed containers.

11. Toxicological Information

Inhalation:
Inhalation is the most significant route of exposure to solvents. Acute or immediate symptoms of over exposure include mild respiratory tract irritation, light headedness, headache, drowsiness, tiredness leading to unconsciousness on extreme over exposure.
Toluene. Toluene is harmful by inhalation and may also be absorbed through the skin. The main health effect short and long term is upon the central nervous system, giving rise to symptoms such as dizziness, headache, impaired co-ordination and reaction times and fatigue.
Petroleum Hydrocarbon Distillate: This solvent consists essentially of a mixture of aliphatic hydrocarbons with a maximum n-hexane content of 5%. There no clear evidence of long term effects associated with the use of this type of low n-hexane solvent under normal controlled conditions.

Skin:
Solvents have a defatting action on the skin. The combined action of solvents and resin present in the adhesive may irritate the skin and a few susceptible individuals could develop an allergy to the resin.

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12. Ecological Information

The petroleum hydrocarbon distillate is classified by the solvent producers as Dangerous for the Environment* with Risk Phrase
R51/53 Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
* Classification based on tests carried out by the solvent producers.

13. Disposal Considerations

Disposal of waste product and containers is subject to the Duty of Care* and conditions set by local authorities. Waste must only be transported and disposed of by authorised or registered contractors. This applies also to used or "empty" containers which may contain hazardous residues and vapours.
*The Duty Of Care- A Code of Practice Published by HMSO Dec.1991
Relevant Legislation Refs.6,7.

14. Transport Information

Road UK[8,9]	UN.	1133
	PSN	Adhesives
	Class:	3
	Packing Group:	III
IMDG (Sea)	UN No.	1133
	Class:	3,2
	Packing Group:	III (Receptacle <30 litres)
	Marine Pollutant:	No

15. Regulatory Information

Supply Classification and Labelling - CHIP Regulations[1]:

Designation:	Thixofix Adhesive Contains Toluene	
Symbol(s):	F, Xn	
Indication of Danger.	HIGHLY FLAMMABLE. HARMFUL.	
Risk Phrases:	Harmful by inhalation.	R20
Safety Phrases.	Keep away from sources of ignition - No smoking.	S16
	Use only in well ventilated areas.	S51
	Do not empty into drains.	S29
	Keep out of reach of children.	S2

* References to Legislation
1: Chemicals (Hazard Information and Packaging) Regulations 1994 - CHIP 2; amended 1996, 1997.
2: Control of Substances Hazardous to Health Regulations 1994 (COSHH).
3: Personal Protective Equipment at Work Regulations 1992
4: The Petroleum (Consolidation) Act 1928 and subsequent Orders.
5: The Highly Flammable Liquids and Liquefied Petroleum Gases Regulations 1972.
6: The Environmental Protection Act 1990.
7: The Special Waste Regulations 1996.
8: The Carriage of Dangerous Goods by Road Regulations 1996.
9. The Carriage of Dangerous Goods (Classification, Packaging and Labelling) and use of Transportable Pressure Receptacles Regulations 1996

16. Other Information

This information is accurate to the best of knowledge of Norcros Adhesives and is given on the understanding that the product will be used in accordance with any instructions given with the product. Should any use be contemplated outside these instructions then appropriate advice should be sought.
* Indicates revised section.