



## Safety Data Sheet according to (EC) No 1907/2006

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X32-10I LOW SOLID FLUX 55GA DR

sds no. : 175676  
V006.1

Revision: 05.09.2011  
printing date: 12.01.2012

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

**Product identifier:**

X32-10I LOW SOLID FLUX 55GA DR

**Relevant identified uses of the substance or mixture and uses advised against:**

Intended use:  
Liquid Flux

**Details of the supplier of the safety data sheet:**

Henkel Limited  
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AL109EY Herfordshire Hatfield

Great Britain

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**Emergency Telephone Number:**

24 Hours Emergency Tel: +44 (0)1442 278497

### SECTION 2: Hazards identification

**Classification of the substance or mixture:**

**Classification (DPD):**

F - Highly flammable  
R11 Highly flammable.  
Xi - Irritant  
R36 Irritating to eyes.  
R67 Vapours may cause drowsiness and dizziness.

**Label elements (DPD):**

F - Highly flammable



Xi - Irritant

**Risk phrases:**

R11 Highly flammable.  
R36 Irritating to eyes.  
R67 Vapours may cause drowsiness and dizziness.

**Safety phrases:**

S16 Keep away from sources of ignition - No smoking.  
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S51 Use only in well-ventilated areas.

**Other hazards:**

Fumes evolved at soldering temperatures will irritate the nose, throat and lungs. Prolonged or repeated exposure to flux fumes may result in sensitisation in sensitive workers.

**SECTION 3: Composition/information on ingredients****Declaration of the ingredients according to CLP (EC) No 1272/2008:**

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Propan-2-ol 67-63-0	200-661-7	80- 100 %	Specific target organ toxicity - single exposure 3 H336 Flammable liquids 2 H225 Serious eye irritation 2 H319
Adipic acid 124-04-9	204-673-3	1- 5 %	Serious eye irritation 2 H319
Biphenyl-2-ol 90-43-7	201-993-5 01-2119511183-53	0,1- 1 %	Serious eye irritation 2 H319 Specific target organ toxicity - single exposure 3 H335 Skin irritation 2 H315 Acute hazards to the aquatic environment 1 H400

Only dangerous ingredients for which a CLP classification is already available are displayed in this table.

For full text of the H - statements and other abbreviations see section 16 "Other information".

Substances without classification may have community workplace exposure limits available.

**Declaration of ingredients according to DPD (EC) No 1999/45:**

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Propan-2-ol 67-63-0	200-661-7	80 - 100 %	Xi - Irritant; R36 F - Highly flammable; R11 R67
Dimethyl succinate 106-65-0	203-419-9	1 - 5 %	Xi - Irritant; R36
Adipic acid 124-04-9	204-673-3	1 - 5 %	Xi - Irritant; R36
Biphenyl-2-ol 90-43-7	201-993-5 01-2119511183-53	0,1 - 1 %	Xi - Irritant; R36/37/38 N - Dangerous for the environment; R50

For full text of the R-Phrases indicated by codes see section 16 'Other Information'.  
Substances without classification may have community workplace exposure limits available.

**SECTION 4: First aid measures****Description of first aid measures:****Inhalation:**

Move to fresh air. If symptoms persist, seek medical advice.

**Skin contact:**

Rinse with running water and soap.  
Seek medical advice.

**Eye contact:**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Seek medical advice.

**Ingestion:**

Do not induce vomiting.  
Seek medical advice.

**Most important symptoms and effects, both acute and delayed:**

EYE: Irritation, conjunctivitis.

**Indication of any immediate medical attention and special treatment needed:**

See section: Description of first aid measures

**SECTION 5: Firefighting measures****Extinguishing media:****Suitable extinguishing media:**

Alcohol-resistant foam.

**Special hazards arising from the substance or mixture:**

Can form explosive gas/air mixtures.  
Oxides of carbon.  
Thermal decomposition can lead to release of irritating gases and vapors.

**Advice for firefighters:**

Wear self-contained breathing apparatus.

**SECTION 6: Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:**

Avoid contact with skin and eyes.  
Wear protective equipment.

**Environmental precautions:**

Do not let product enter drains.  
Prevent further leakage or spillage if safe to do so.

**Methods and material for containment and cleaning up:**

Remove all sources of ignition.  
For small spills wipe up with paper towel and place in container for disposal.  
For large spills absorb onto inert absorbent material and place in sealed container for disposal.

**Reference to other sections:**

See advice in chapter 8

**SECTION 7: Handling and storage****Precautions for safe handling:**

Use only in well-ventilated areas.  
Keep away from sources of ignition - no smoking.  
Wear suitable protective clothing, safety glasses and gloves.  
See advice in chapter 8  
Take measures to prevent the build-up of electrostatic charges.

**Hygiene measures:**

Good industrial hygiene practices should be observed.  
Wash hands before work breaks and after finishing work.  
Do not eat, drink or smoke while working.

**Conditions for safe storage, including any incompatibilities:**

Ensure good ventilation/extraction.  
Store in a cool, well-ventilated place.  
Keep away from sources of ignition.

**Specific end use(s):**

Liquid Flux

**SECTION 8: Exposure controls/personal protection****Control parameters:**

Valid for  
Great Britain

Ingredient	ppm	mg/m <sup>3</sup>	Type	Category	Remarks
PROPAN-2-OL 67-63-0	400	999	Time Weighted Average (TWA):		EH40 WEL
PROPAN-2-OL 67-63-0	500	1.250	Short Term Exposure Limit (STEL):		EH40 WEL

**Exposure controls:****Engineering controls:**

Ensure adequate ventilation, especially in confined areas.  
Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.  
Extraction is necessary to remove fumes evolved during reflow.

**Respiratory protection:**

Ensure adequate ventilation.  
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area  
Filter type: A

**Hand protection:**

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30

minutes permeation time as per EN 374):

nitrile rubber (NBR;  $\geq 0.4$  mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):

nitrile rubber (NBR;  $\geq 0.4$  mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

**Eye protection:**

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

**Skin protection:**

Wear suitable protective clothing.

**SECTION 9: Physical and chemical properties****Information on basic physical and chemical properties:**

Appearance	liquid
	colourless
Odor	alcohol-like
pH	not applicable
Initial boiling point	82 °C (179.6 °F)
Flash point	14 °C (57.2 °F)
Decomposition temperature	No data available / Not applicable
Vapour pressure	6,6 kPa
(25 °C (77 °F))	
Density	0,816 g/cm <sup>3</sup>
(25 °C (77 °F))	
Bulk density	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative)	Miscible
(25 °C (77 °F); Solvent: Water)	
Solidification temperature	No data available / Not applicable
Melting point	No data available / Not applicable
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	
lower	2 % (V)
upper	12 % (V)
Partition coefficient: n-octanol/water	Not determined
Evaporation rate	No data available / Not applicable
Vapor density	No data available / Not applicable
Oxidising properties	No data available / Not applicable

**Other information:**

No data available / Not applicable

**SECTION 10: Stability and reactivity****Reactivity:**

Reaction with strong oxidants.

Dissolves aluminium and zinc slowly with formation of hydrogen.

**Chemical stability:**

Stable under recommended storage conditions.

**Possibility of hazardous reactions:**

See section reactivity

**Conditions to avoid:**

No decomposition if stored and applied as directed.

**Incompatible materials:**

None if used properly.

**Hazardous decomposition products:**

Thermal decomposition can lead to release of irritating gases and vapors.

**SECTION 11: Toxicological information****General toxicological information:**

The preparation is classified based on the conventional method outlined in Article 6(1)(a) of Directive 1999/45/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

**Oral toxicity:**

May cause irritation to the digestive tract.  
Ingestion of large quantities may cause liver or kidney damage.

**Inhalative toxicity:**

Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.  
Fumes evolved at soldering temperatures will irritate the nose, throat and lungs.

**Skin irritation:**

Prolonged or repeated contact may cause skin irritation.

**Eye irritation:**

Irritating to eyes.  
Liquid may cause conjunctival irritation.

**Acute toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Propan-2-ol 67-63-0	LD50	5.338 mg/kg	oral	4 h	rat	
	LC50	72,6 mg/l	inhalation		rat	
	LD50	12.870 mg/kg	dermal		rabbit	
Adipic acid 124-04-9	LD50	5.560 mg/kg	oral	4 h	rat	
	LC50	> 7,7 mg/l	inhalation		rat	
Biphenyl-2-ol 90-43-7	LD50	2.980 mg/kg	oral		rat	
	LD50	> 5.000 mg/kg	dermal		rabbit	

**Skin corrosion/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Propan-2-ol 67-63-0	slightly irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Dimethyl succinate 106-65-0	not irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Adipic acid 124-04-9	slightly irritating		rabbit	
Biphenyl-2-ol 90-43-7	corrosive		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

**Serious eye damage/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Propan-2-ol 67-63-0	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Dimethyl succinate 106-65-0	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Adipic acid 124-04-9	not irritating		rabbit	
Biphenyl-2-ol 90-43-7	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

**Respiratory or skin sensitization:**

Hazardous components CAS-No.	Result	Test type	Species	Method
Propan-2-ol 67-63-0	not sensitising	Buehler test	guinea pig	
Adipic acid 124-04-9	not sensitising		guinea pig	
Biphenyl-2-ol 90-43-7	not sensitising	Guinea pig maximisation test	guinea pig	

**Germ cell mutagenicity:**

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Propan-2-ol 67-63-0	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		
Adipic acid 124-04-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		

**Repeated dose toxicity**

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Propan-2-ol 67-63-0	NOAEL=1500	inhalation	13 weeks 6 hours/day, 5 days/week	mouse	

**SECTION 12: Ecological information****General ecological information:**

The preparation is classified based on the conventional method outlined in Article 6(1)(a) of Directive 1999/45/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

**Ecotoxicity:**

May cause long-term adverse effects in the aquatic environment.

**Mobility:**

The product evaporates readily.

**Persistence and degradability:****Degradation of surfactants**

Propan-2-ol: BOD<sub>5</sub> = 28% (fresh water), 13% (salt water) BOD<sub>20</sub> = 78% (fresh water), 72% (salt water)

**Bioaccumulative potential:**

Octanol/Water distribution coefficient: Not determined

**Toxicity:**

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Propan-2-ol 67-63-0	LC50	9.640 mg/l	Fish	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
Propan-2-ol 67-63-0	EC50	13.299 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Propan-2-ol 67-63-0	EC50	> 1.000 mg/l	Algae	96 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Dimethyl succinate 106-65-0	LC50	50 - 100 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Adipic acid 124-04-9	LC50	97 mg/l	Fish	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
Adipic acid 124-04-9	EC50	85,7 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Adipic acid 124-04-9	EC50	> 100 mg/l	Algae			OECD Guideline 201 (Alga, Growth Inhibition Test)
Biphenyl-2-ol 90-43-7	LC50	5,5 mg/l	Fish	48 h	Leuciscus idus	
Biphenyl-2-ol 90-43-7	EC50	3,6 mg/l	Daphnia	24 h	Daphnia magna	
Biphenyl-2-ol 90-43-7	EC50	0,85 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)

**Persistence and degradability:**

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Propan-2-ol 67-63-0	readily biodegradable	aerobic	95 %	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)
Adipic acid 124-04-9	readily biodegradable	no data	96 %	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)
Biphenyl-2-ol 90-43-7	readily biodegradable	aerobic	96 - 98 %	EU Method C.4-B (Determination of the "Ready" Biodegradability Modified OECD Screening Test)

**Bioaccumulative potential / Mobility in soil:**

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Propan-2-ol 67-63-0	0,05					OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Dimethyl succinate 106-65-0	0,35					
Adipic acid 124-04-9	0,081				25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Biphenyl-2-ol 90-43-7	3,09					

**SECTION 13: Disposal considerations****Waste treatment methods:**



**Product disposal:**

Dispose of as hazardous waste in compliance with local and national regulations.  
Incineration under controlled conditions is recommended.

**Disposal of uncleaned packages:**

Dispose of as unused product.

**Waste code**

14 06 03 - other solvents and solvent mixtures

**SECTION 14: Transport information****Road transport ADR:**

Class: 3  
Packaging group: II  
Classification code: F1  
Hazard ident. number: 33  
UN no.: 1219  
Label: 3  
Technical name: ISOPROPANOL (solution)  
Tunnelcode: (D/E)

**Railroad transport RID:**

Class: 3  
Packaging group: II  
Classification code: F1  
Hazard ident. number: 33  
UN no.: 1219  
Label: 3  
Technical name: ISOPROPANOL (solution)  
Tunnelcode: -

**Inland water transport ADN:**

Class: 3  
Packaging group: II  
Classification code: F1  
Hazard ident. number: 33  
UN no.: 1219  
Label: 3  
Technical name: ISOPROPANOL (solution)

**Marine transport IMDG:**

Class: 3  
Packaging group: II  
UN no.: 1219  
Label: 3  
EmS: F-E ,S-D  
Seawater pollutant: -  
Proper shipping name: ISOPROPANOL (solution)

**Air transport IATA:**

Class: 3  
Packaging group: II  
Packaging instructions (passenger): 353  
Packaging instructions (cargo): 364  
UN no.: 1219  
Label: 3  
Proper shipping name: Isopropanol (solution)

### SECTION 15: Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture:**

VOC content 85 - 95 %  
(1999/13/EC)

**National regulations/information (Great Britain):**

Remarks	The Health & Safety at Work Act 1974. The Control of Substances Hazardous to Health Regulations. L5:General Approved Code of Practice to the COSHH Regulations. HS(G)97:A Step by Step Guide to the COSHH Regulations. HS(G)193: COSHH essentials: Easy steps to control chemicals. HS(G)51: The Storage of Highly Flammable Liquids in Containers. HS(G)140: The Safe Use and Handling of Highly Flammable Liquids EH9: The Spraying of Highly Flammable Liquids.
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### SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

R11 Highly flammable.  
R36 Irritating to eyes.  
R36/37/38 Irritating to eyes, respiratory system and skin.  
R50 Very toxic to aquatic organisms.  
R67 Vapours may cause drowsiness and dizziness.

H225 Highly flammable liquid and vapor.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H400 Very toxic to aquatic life.

**Further information:**

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

This safety data sheet was prepared in accordance with Council Directive 67/548/EEC and its subsequent amendments, and Commission Directive 1999/45/EC.