TO HER MAJESTY THE QUEEN
MANUFACTURERS OF LEATHER
J. HEWIT & SONS LTD. EDINBURGH

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HEALTH AND SAFETY AND TECHNICAL INFORMATION

C1 FLEXIBLE GLUE (J733)

Revision Date – November 2019

Specially formulated natural Adhesive of low odour. Its high solids and being fully flexible give it a wide application for bookbinding - both spinework and case making operations.

Whilst like our slower setting/longer open time grade CB4, this grade is ideal for conservation work. It will also be found suitable for some automatic case making machines, giving excellent non-warp characteristics.

It is eminently suitable for use on Balena, Swift and Nubal machines for hand made case making operations.

DIRECTIONS FOR USE

Packed in 2.5kg polythene lined blocks, this adhesive should be turned out of the polythene and cut into 1-2 kilo slabs, before being places in the adhesive trough.

The adhesive should be heated to a temperature of 50-60^{0}C (120 – 140^{0}F) when it will liquefy and be ready for use. In no circumstances must the heat of the adhesive exceed 60^{0}C (140^{0}F) otherwise one risks the adhesive becoming degraded.

Being a versatile adhesive, it will probably require dilution for some operations. If evaporation occurs, small quantities of warm water may be added.

In common with all natural adhesives, it is recommended to clean the adhesive troughs regularly to maintain the good quality and preserve the odour and colour of the adhesive.

NB. Increasing the operating temperature to 60^{0}C and/or the addition of warm water can lengthen open time of this adhesive.

The adhesive is completely non-foaming and entirely innocuous.

Product safety data sheet according to regulation 830/2015/EC
Date: 07/11/2019 Version: 3.0
J 733

1. Identification of the substance/mixture and of the company/undertaking
1.1 Product identifier
Trade name: J 733
Product type: Protein based glue
1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: Adhesive
Uses advised against: None
1.3 Details of the supplier of the safety data sheet
Supplier: J HEWIT & SONS LTD.

2. Hazards identification
2.1. Classification of the substance or mixture
2.1.1. Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
The product is not classified as hazardous.
2.2. Label elements
EUH208: Contains p-Chlorocresol. May cause allergic reactions.
2.3. Other hazards: None.

3. Composition / Information on ingredients
3.1. Substances: Not applicable.
3.2. Mixtures
3.2.1. Description of the mixture: Adhesive based on a colloidal aqueous gelatin solution.
3.2.2. Components classified according to Directive 1272/2008/EC [CLP/GHS]
Component name CAS n° EC n° Concentration Classification
p-chlorocresol 59-50-7 200-431-6 < 1% Acute Tox. 4 H312
Acute Tox. 4 H302
Eye Dam. 1 H318
Skin Sens. 1 H317
STOT SE 3 H335; Respiratory system
Aq. Acute 1 H400
Aq. Chronic 3 H412; (M-factor Aq. Chronic:1)
3.2.3. Additional information: See section 16 for full text of H-phrases.

4. First-aid measures
4.1 Descriptions of first aid measures
4.1.1 Contact with skin: Wash with plenty of water and soap.
4.1.2 Contact with eyes: Wash immediately with water for at least 10 minutes.
4.1.3 Swallowing: No immediate danger, contact physician if necessary and present the safety data sheet.
4.1.4 Inhalation: Ventilate the premises.
4.2 Most important symptoms and effects, both acute and delayed: None.
4.3 Indication of any immediate medical attention and special treatment needed: None.

5. Firefighting measures
5.1 Extinguishing media
5.1.1 Suitable extinguishing media: Large quantities of water, powder, carbon dioxide, foam or spray.
5.1.2 Unsuitable extinguishing media: None that are known.
5.2 Special hazards arising from the substance or mixture: None that are known.
5.3 Advise for firefighters
5.3.1 Risks arising from combustion: Avoid inhaling the fumes.
5.3.2 Protective equipment: A breathing mask to protect the respiratory tract.

6. Accidental release measures
6.1 Personal precautions, protective equipment and emergency procedures: Use gloves and protective clothing.
6.2 Environmental precautions: Limit leaking with earth and sand. If the product has escaped into a water course, into the drainage system, or has contaminated the ground or vegetation, notify the competent authorities.
6.3 Methods and material for containment and cleaning up: If the product is in a liquid form, stop it from entering the drainage system.
Recover the product for re-use if possible, or for elimination. The product might, where appropriate, be absorbed by inert material. After the product has been recovered, rinse the area and materials involved with water.
6.4 Reference to other sections: Additional information see section 13.

7. Handling and storage

7.1 Precautions for safe handling
7.1.1 Protective measures: Avoid contact with skin and eyes. Do not eat, drink and smoke in work areas.
7.1.2 Advice on general occupational hygiene: Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.
7.2 Conditions for safe storage, including any incompatibilities
7.2.1 Materials to avoid: None in particular.
7.2.2 Storage conditions: Store between 10 and 20 °C in adequately ventilated and dry place.
7.2.3 Packaging materials: Original packaging.
7.3 Specific end uses: Industrial

8. Exposure controls / Personal protection

8.1 Control parameters: No information available.
8.2 Exposure controls
8.2.1 Appropriate engineering controls: Adequately ventilated workstation.
8.2.2 Respiratory protection: Not needed for normal use.
8.2.3 Protection for hands: Use appropriate gloves.
8.2.4 Eye protection: Not needed for normal use.
8.2.5 Protection for skin: No special precaution must be adapted for normal use.
8.2.6 Environmental exposure controls: Avoid release in the water course.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties
Appearance: Gel
Colour: Amber
Odour: Typical
pH: 6 at 60 °C
Boiling point: 100 °C (water)
Melting point: ca. 39 °C
Flash point: None
Auto ignition temperature: None
Explosion limits (by volume) : None
Solubility in water: 100 % at 45 °C
Density: ca 1.3 g/cm³
Viscosity: 650 – 900 mPa.s (60 °C) at Q.C.
9.2 Other information
9.2.1. Physical hazards: Not applicable.

10. Stability and reactivity

10.1 Reactivity: Not reactive under normal conditions.
10.2 Chemical stability: Stable under normal conditions.
10.3 Possibility of hazardous reactions: None.
10.4 Conditions to avoid: Extreme low and high temperatures.
10.5 Incompatible materials: None in particular.
10.6 Hazardous decomposition products: None as long as the storage and handling rules are followed.

11. Toxicological information

11.1 Information on toxicological effects
11.1.1 Mixtures
Substance 1: p-chlorocresol
Animal data
Species Method Result
a) Acute oral toxicity Rat OECD 401 1830 mg / kg (LD_{50}) rat, male
b) Acute dermal toxicity
Rat OECD 402 > 2000 mg / kg (LD_{50})
c) Acute inhalation toxicity (gas)
Not applicable Not applicable Not applicable
d) Acute inhalation toxicity (vapour)
Not applicable Not applicable Not applicable
e) Acute inhalation toxicity (dust/mist)
Rat - male, female OECD 403
> 2,871 mg / l (LC_{50}). ET: 4 h. Highest producible concentration. The substance has no acute inhalation toxicity.
f) Eye damage / eye irritation
Rabbit No data available Risk of serious damage to eyes.
g) Skin corrosion / irritation
Rabbit No data available No skin irritation.

h) Skin / respiratory sensitization
Guinea pig OECD 406 Sensitizing.
i) Germ cell mutagenicity
Bacteria, Mammalian, Mammalian, Mouse OECD 471, 476, 482, 474
Not classified (Based on available data, the classification criteria are not met).
j) Carcinogenicity Rat - male, female OECD 453
NOAEL: 558.9 mg/kg;

(ET: 104 weeks; AR: oral)

Species Method Result
k) Reproductive toxicity
Fertility: rat - male, female
OECD 416
General toxicity F1: NOAEL: 247.8 mg/kg body weight.
(AR: oral)
Foetal development:
rat - male, female
OECD 414
Developmental toxicity: NOAEL: 100 mg/kg body weight.
(AR: oral).
l) STOT - single exposure
No data available No data available May cause respiratory irritation.
m) STOT - repeated exposure
Rat - male OECD 408
NOAEL: 120 mg/kg. Subchronic toxicity.
(AR: oral; ET: 90 days; NoE: daily)
Rat - male, female OECD 411
NOAEL: 500 mg/kg. Subchronic toxicity.
(AR:dermal; ET:90 days; NoE:daily)
n) Aspiration hazard No data available No data available
Not classified (Based on available data, the classification criteria are not met)
11.1.2 Other information
Corrosive /Irritating Properties: Eye: The product can cause temporary irritation by contact.

12. Ecological information

No information available on mixture.
12.1 Toxicity
Substance 1: p-chlorocresol
Acute aquatic toxicity
Species Result Additional information
Fish: Oncorhynchus mykiss (rainbow trout)
0.917 mg/l (LC_{50}) ET: 96 h
Invertebrates: Daphnia magna (water flea)
2.29 mg/l (EC_{50})
Method: OPP 72-2 (Aquatic Invertebrate Acute Toxicity Test)
ET: 48 h
Algae: Desmodesmus subspicatus (green algae)
30.62 mg/l (EC_{50}) Method: OECD 201
9.8 mg/l (NOEC) ET: 72 h
Microorganisms 41.4 mg/l (EC_{50})
Method: OECD 209
ET: 3 h

Chronic aquatic toxicity
Species Result Additional information
Fish: Oncorhynchus mykiss (rainbow trout)
0.15 mg/l (NOEC)
Method: OECD 215
ET: 28 d
Invertebrates: Daphnia magna (water flea)
0.32 mg/l (NOEC)
Method: OECD 211
ET: 21 d
12.2 Persistence and degradability
Substance 1: p-chlorocresol
Method Result

OECD 301DET: 28 d85 % (Readily biodegradable)

12.3 Bioaccumulative potential
Substance 1: p-chlorocresol
Method Result
OECD 107
Log P_{ow}: 2.73 (25 °C); pH: 7.2 (weak potential)
12.4 Mobility in soil: No information available.
12.5 Results of PBT and vPvB assessment: No information available.
12.6 Other adverse effects: Adapt healthy working practices, so that the product is not released into the environment.

13. Disposal considerations
13.1 Waste treatment methods
Recommendation: disposal of waste according to regulations by incineration in and special waste incinerator. Smaller quantities can be processed in a normal waste incinerator. Completely discharge containers (no tear drops, no powder rest, scraped carefully). Packages that are subject to local and / or national provisions should preferably be recycled or destroyed. Recommended cleaning tool: water. Observe local regulation.

14. Transport information
ADR ADN IMDG ICAO-TI/IATA-DGR
14.1 UN n° Not applicable Not applicable Not applicable Not applicable
14.2 UN Proper shipping name Not applicable Not applicable Not applicable Not applicable
14.3 Transport hazard class(es)
Not applicable Not applicable Not applicable Not applicable
Hazard label(s) None None None None
14.4 Packing group Not applicable Not applicable Not applicable Not applicable
14.5 Environmental hazards None None None None
14.6 Special precautions for user: None.
14.7 Transport in bulk according to Annex II of MARPOL and the IBC code: Not applicable.

15 Regulatory information
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
15.1.1 EU regulations
Authorizations: Not applicable.
Restrictions on use: None.
The approximation of laws, regulations and administrative provisions relating to the classification, packaging and labeling of dangerous preparations according to regulation 1272/2008/EC this product is not classified as dangerous.
Regulation 1907/2006/EC (REACH)
Substances listed on the REACH candidate list of substances of very high concern for authorization (SVHC list):
None
15.2 Chemical safety assessment: The normal safety regulations when handling chemicals should be observed.

16 Other information
16.1 Indication of changes:
Section and subsection titles were changed.
Changes in overall lay-out of the safety data sheet.
Heading: Logo modified.
Heading: “version: …” added.
Heading: “Creation” date deleted.
Heading: The number of regulation modified.
Section 1.1 – Information modified.
Section 1.2 - The subsections “relevant identified uses” and “uses advised against” added.
Section 3.1 - Section and information modified.
Section 3.2 modified.
Subsection 3.2.1 - Subsection and information modified.
Subsections 3.2.2 and 3.2.3 – Subsection and information added.
Section 5.2 - Information added.

Subsection 5.3.2 - Information modified.
Subsection 7.1.1 - Information added.
Subsection 7.1.2 - Information modified.
Subsections 7.1.3 and 7.1.4 deleted.
Subsection 7.2.1 modified.
Subsection 7.2.2 - Information modified.
Subsection 7.2.3 - Subsection and information modified.
Section 7.3 - Information added.
Subsection 7.3.1 deleted.
Section 8.1 - Section and information modified.
Subsection 8.2.1 - Subsection and information modified.
Subsections 8.2.2 u.t.a.i. 8.2.6 added.
Section 8.3 with its subsections 8.3.1 u.t.a.i 8.3.4 deleted.
Subsections 9.1.1 and 9.1.2 deleted.
Section 9.1 - Information on “Color” modified.
Section 9.2 - Information modified.
Subsection 9.2.1 – Subsection and information added.
Section 10.1 - Information modified.
Section 10.6 – Section modified and information added.
Section 10.7 deleted.
Section 11.1 - Information modified.
Subsection 11.1.1 – Subsection and information added and placed in table.
Subsection 11.1.2 – Subsection and information added.
Sections 11.2 u.t.a.i. 11.5 deleted.
Section 12 – Information added.
Sections 12.1 u.t.a.i. 12.3 - Information added and placed in table.
Section 12.5 - Information modified.
Section 13.1 - Information modified.
Section 13.2 deleted.
Sections 14.1 u.t.a.i. 14.4 – Section and information modified and placed in table.
Section 14.5 – Section and information added and placed in table.
Sections 14.6 and 14.7 – Section and information added.
Section 15.1 - Information modified.
Subsection 15.1.1 - Subsection and information added.
Sections 16.1 u.t.a.i. 16.6 - Section and information added.
Section 16.7 added.
16.2 Abbreviations and acronyms
CLP: Classification Labelling Packaging according to regulation 1272/2008/EC.

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EUH: CLP specific phrase.
H-phrase: Hazard-phrase.
CAS n°: numerical identifier assigned by the Chemical Abstracts Service to every chemical substance.
EC n°: European Community number assigned to chemical substances.
Q.C.: Quality Control.
OECD: Organisation for Economic Co-operation and Development.
LD_{50}: Median lethal dose.
LC_{50}: Median lethal concentration.
NOAEL: No Observed Adverse Effect Level
ET: Exposure time.
AR: Application route.
NoE: Number of exposures.
EC_{50}: Median effective concentration.
NOEC: No Observed Effect Concentration
P_{ow}: Octanol/water-partition coefficient
PBT: Persistent, Bioaccumulative and Toxic substances
vPvB: Very Persistent and very Bioaccumulative
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
AND: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG: International Maritime Dangerous Goods.
ICAO-TI: International Civil Aviation Organization-Technical Instructions
IATA-DGR: International Air Transport Association-Dangerous Goods Regulations
UN n°: United nations number
EU: European Union
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
SVHC: Substances of Very High Concern
ECHA: European Chemicals Agency
SDS: Safety Data Sheet
16.3 Key literature references and sources for data: ECHA and EUR-Lex website.
16.4 Classification for mixtures and used evaluation method according to regulation 1272/2008/EC [CLP]
The mixture J 733 is not classified. The evaluation has been done by using calculation method.
16.5 Relevant H- and EUH-phrases from sections 2 and 3 (number and full text):
Acute Tox. 4: Acute toxicity (dermal), Category 4
H312: Harmful in contact with skin.
Acute Tox. 4: Acute toxicity (oral), Category 4
H302: Harmful if swallowed.
Eye Dam. 1: Serious eye damage/eye irritation, Category 1
H318: Causes serious eye damage.

Skin Sens. 1: Sensitisation — Skin, Hazard Category 1
H317: May cause an allergic skin reaction.
STOT SE 3: Specific target organ toxicity - Single exposure, Respiratory system, Category 3
H 335: May cause respiratory irritation.
Aq. Acute 1: Hazardous to the aquatic environment — Acute Hazard, Category 1
H400: Very toxic to aquatic life.
Aq. Chronic 3: Hazardous to the aquatic environment — Chronic Hazard, Category 3
H412: Harmful to aquatic life with long lasting effects.
EUH208: Contains p-Chlorocresol. May cause allergic reactions.

16.6 Training advice: No specific advice.
16.7 Further information
The receiver / user of J 733 is responsible for complying with all laws and regulations relating to its activities.
The information contained herein is based on our state of knowledge at the above specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.
This safety data sheet is prepared according to regulation 830/2015/EC. This SDS cancels and replaces any preceding release.
Contact: Reg. Aff. Dep.