JAD DEVELOPER - AEROSOL

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758 and SI 2020/1577

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name	JAD DEVELOPER - AEROSOL

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s)	For use in the Dye Penetrant Inspection Process BS EN ISO 571-1:1997 (BS EN ISO 3452-2:2006 Sensitivity level 2 when used in conjunction with penetrant family products).
Uses Advised Against	Not known.

1.3 Details of the supplier of the safety data sheet

Manufacturer

Company Identification	Johnson and Allen Ltd
Address of Manufacturer	Neocol Works Smithfield Sheffield
Postal code	S3 7AR
Telephone	0114 2738066
Fax	0114 2729842
E-mail	info@johnsonandallen.co.uk
Office hours	08:30 - 17:00

Only representative

Company Identification	DIMART S.r.l.
Address	Via A. Einstein 13 Sedriano MI Italy
Postal code	20018
Telephone	+390290310207
Fax	+390290310208

1.4 Emergency telephone number

Company	0114 2738066 (UK office hours 08.30-17.00)
NHS Direct	+44 111

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GB CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	Aerosol 3 :Pressurised container: May burst if heated. Skin Irrit. 2 :Causes skin irritation. Eye Irrit. 2 :Causes serious eye irritation. STOT SE 3 :May cause drowsiness or dizziness. Carc. 2 :Suspected of causing cancer.

2.2 Label elements

According to GB CLP Regulations, UK SI 2019/720 and UK SI 2020/1567

Product Name	JAD DEVELOPER - AEROSOL

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Hazard Pictogram(s)

GHS08

GHS07

Signal Word(s) Warning

Hazard Statement(s)

H229: Pressurised container: May burst if heated.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H336: May cause drowsiness or dizziness.

H351: Suspected of causing cancer.

Precautionary Statement(s)

P201: Obtain special instructions before use.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P251: Do not pierce or burn, even after use.

P261: Avoid breathing mist/vapours/spray.

P271: Use only outdoors or in a well-ventilated area.

P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50°C/ 122°F.

2.3 Other hazards

None known.

2.4 Additional Information

For full text of H/P Statements see section 16.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Product as supplied: Aerosol.

3.1 Substances

Not applicable.

3.2 Mixtures

HAZARDOUS INGREDIENT(S)	CAS No.	EC No. / Registration number(s)	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
Dichloromethane	75-09-2	200-838-9	70-90	Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3 H336 Carc. 2 H351	GHS08 GHS07
Carbon dioxide	124-38-9	204-696-9	1-10	Press. Gas (Comp.) H280	GHS04
Alcohols, C12-13, ethoxylated	66455-14-9	500-165-3	<1	Eye Irrit. 2 H319	GHS07

For full text of H/P Statements see section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation	Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE/doctor if you feel unwell.
Skin Contact	Take off contaminated clothing and wash it before reuse. Wash with plenty of water. If skin irritation occurs: Get medical advice/attention.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Unlikely route of exposure.

4.2 Most important symptoms and effects, both acute and delayed

Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of causing cancer.

4.3 Indication of any immediate medical attention and special treatment needed

IF exposed or concerned: Get medical advice/attention.

SECTION 5: FIREFIGHTING MEASURES

Pressurised container: May burst if heated.

5.1 Extinguishing media

Suitable Extinguishing media	As appropriate for surrounding fire.
Unsuitable extinguishing media	None.

5.2 Special hazards arising from the substance or mixture

Heating may cause pressure rise with risk of bursting. Decomposes in a fire giving off toxic fumes: Phosgene, Hydrogen chloride, Carbon monoxide, Carbon dioxide.

5.3 Advice for firefighters

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire area because they are likely to rupture under fire conditions. Keep containers cool by spraying with water if exposed to fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

The product is an aerosol. It is unlikely to present spillage or leakage hazard. In case of rupture, released content should be contained as any other solvent spill.

6.1 Personal precautions, protective equipment and emergency procedures

Stop leak if safe to do so. Provide adequate ventilation. Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Ensure full personal protection (including respiratory protection) during removal of spillages.

6.2 Environmental precautions

Do not release large quantities into the surface water or into drains.

6.3 Methods and material for containment and cleaning up

Collect mechanically and dispose of according to Section 13. Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a lidded container for disposal or recovery. Containers must not be punctured or destroyed by burning, even when empty.

6.4 Reference to other sections

See Also Section 8, 13.

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SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurised container - Do not pierce or burn, even after use. Provide adequate ventilation. Use only outdoors or in a well-ventilated area. Avoid breathing mist/vapours/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands and exposed skin thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Protect from sunlight. Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Storage temperature	Do not expose to temperatures exceeding 50°C/ 122°F.
Storage life	Stable under normal conditions.
Incompatible materials	Strong oxidising agents, Alkalis, Zinc, Aluminium.

7.3 Specific end use(s)

For use in the Dye Penetrant Inspection Process BS EN ISO 571-1:1997 (BS EN ISO 3452-2:2006 Sensitivity level 2 when used in conjunction with penetrant family products).

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Dichloromethane	75-09-2	100	353	200	706	BMGV, Sk
Carbon dioxide	124-38-9	5000	9150	15000	27400	

Region	Source
United Kingdom	UK Workplace Exposure Limits EH40/2005 (Fourth edition, published 2020)

Remark	Notes
BMGV	Biological monitoring guidance values are listed in Table 2.
Sk	Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.

Biological Exposure Indices						
Substances	CAS Number	Sampling	Tissues	Control parameters	Biological monitoring guidance value	Comments
Dichloromethane	75-09-2	Post shift	end-tidal breath	carbon monoxide	30 ppm	

8.2 Exposure controls

8.2.1. Appropriate engineering controls: Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Use with ventilation, local exhaust ventilation or breathing protection.

8.2.2. Personal protection equipment

Eye Protection — Wear eye protection with side protection (EN166).

Skin protection — Wear protective clothing and gloves: Impervious gloves (EN 374).
Breakthrough time of the glove material: refer to the information provided by the gloves' producer. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Protective gloves should be replaced at first signs of wear.
Material: Fluorinated Rubber (Viton)
Break through time: > 480 min
Glove thickness: > 0.4 mm
Material: PVA
Break through time: > 480 min
Glove thickness: > 0.4 mm
Material: Butyl Rubber
Break through time: > 10 min
Glove thickness: > 0.4 mm

Respiratory protection — Wear a suitable respirator to keep the solvent vapour concentration below the occupational limit values. A suitable mask with filter type AX is appropriate.

Thermal hazards — Not applicable.

8.2.3. Environmental Exposure Controls — Do not release large quantities into the surface water or into drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Aerosol Colour: White.
Odour	Characteristic odour.
Odour threshold	Not established.
pH	Not known.
Melting point/freezing point	-94.9°C (Dichloromethane)
Initial boiling point and boiling range	39.8°C (Dichloromethane)
Flash Point	Not applicable.
Evaporation rate	Not known.
Flammability (solid, gas)	Non-flammable.
Upper/lower flammability or explosive limits	Not known.
Vapour pressure	584 hPa (352 mm Hg) @ 25°C (Dichloromethane)
Vapour density	Not known.

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Density (g/ml)	1.32 @ 25°C (Dichloromethane)
Relative density	Not known.
Solubility(ies)	Solubility (Water): Insoluble in water.
	Solubility (Other): Not known.
Partition coefficient: n-octanol/water	1.25 (Dichloromethane)
Auto-ignition temperature	624°C
Decomposition Temperature (°C)	Not known.
Viscosity	Not known.
Explosive properties	Pressurised container: May burst if heated.
Oxidising properties	Not oxidising.

9.2 Other information

None.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical Stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known if used for its intended purpose.

10.4 Conditions to avoid

Keep away from heat and direct sunlight.

10.5 Incompatible materials

Strong oxidising agents, Alkalis, Zinc, Aluminium.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity - Ingestion	Low oral toxicity.
	Dichloromethane: LD50 (rat) >2000 mg/kg
Acute toxicity - Skin Contact	Low acute toxicity.
	Dichloromethane: LD50 (rat) >2000 mg/kg
Acute toxicity - Inhalation	Low acute toxicity.
	Effects and Symptoms: Headache, dizziness, nausea and vomiting. Causes shortness of breath.
	Dichloromethane: LC50 (rat) 4hour(s) = 49000 mg/m³
Skin corrosion/irritation	Calculation method : Causes skin irritation. No data.
Serious eye damage/irritation	Calculation method : Causes serious eye irritation. No data.
Skin sensitization data	Calculation method : Not classified.
	It is not a skin sensitiser.
Respiratory sensitization data	Calculation method : Not classified.

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Germ cell mutagenicity	Calculation method : Not classified. There is no evidence of mutagenic potential.
Carcinogenicity	Calculation method : Suspected of causing cancer. No data. Dichloromethane: A3: Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histological type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiological studies do not confirm an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.
Reproductive toxicity	Calculation method : Not classified. No evidence of reproductive effects.
Lactation	Calculation method : Not classified.
STOT - single exposure	Calculation method : May cause drowsiness or dizziness. No data. Effects and Symptoms: Headache, dizziness, nausea and vomiting. Causes shortness of breath.
STOT - repeated exposure	Calculation method : Not classified.
Aspiration hazard	Calculation method : Not classified.

11.2 Other information

Not known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity - Aquatic invertebrates	Low toxicity to invertebrates.
Toxicity - Fish	Low toxicity to fish. Dichloromethane: LC50 (96 hour) = 193 mg/l
Toxicity - Algae	Low toxicity to algae.
Toxicity - Sediment Compartment	Not classified.
Toxicity - Terrestrial Compartment	Not classified.

12.2 Persistence and degradability

The product is biodegradable. The product is unlikely to persist in the environment.

12.3 Bioaccumulative potential

The product has no potential for bioaccumulation.
Dichloromethane: Bioconcentration factor (BCF): 2.0-5.4

12.4 Mobility in soil

The product is volatile and will partition into the atmosphere. The product has high mobility in soil.

12.5 Results of PBT and vPvB assessment

Not classified as PBT or vPvB.

12.6 Other adverse effects

Not known.

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SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Recycle only completely emptied packaging. Containers must not be punctured or destroyed by burning, even when empty. Non-emptied aerosol: Dispose of wastes in an approved waste disposal facility.

13.2 Additional Information

Disposal should be in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

UN No.	1950

14.2 UN proper shipping name

UN proper shipping name	AEROSOLS

14.3 Transport hazard class(es)

ADR/RID	
ADR/RID Class	2
ADR Classification Code	5A
Special Provisions	190, 327, 344, 625
Limited Quantities	1 L
Excepted Quantities	E0
Emergency Action Code	
Mixed Packing Instructions for Packages	P207 LP200
Special Packing Provisions for Packages	PP87 RR6 L2
Mixed Packing Instructions for Packages	MP9
Packing Instructions for Portable Tanks	
Special Provisions for Portable Tanks	
Tank Code for Tanks	
Special Provisions for Tanks	
Vehicle for Tank Carriage	
ADR Transport Category	3
Tunnel Restriction Code	E
Special Provisions for Carriage - Packages	V14
Special Provisions for Carriage - Bulk	
Special Provisions for Carriage - Loading, Unloading and Handling	CV9 CV12
Special Provisions for Carriage - Operation	
ADR HIN	
IMDG	
IMDG Class	2
Special Provisions	190, 327, 344, 625
Limited Quantities	1 L

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Excepted Quantities	E0
Mixed Packing Instructions for Packages	P207 LP200
Special Packing Provisions for Packages	PP87 RR6 L2
Packing Instructions for Portable Tanks	
Special Provisions for Portable Tanks	
IMDG EMS	F-D, S-U
Stowage and Handling	SW1 SW22
Segregation	SG69
Marine Pollutant	
ICAO/IATA	
IATA Proper Shipping Name	AEROSOLS
Excepted Quantities	E0
Passenger and Cargo Aircraft Limited Quantities Packing Instructions	Y203
Passenger and Cargo Aircraft Limited Quantities Max net Qty	30Kg
Passenger and Cargo Aircraft Packing Instructions	203
Passenger and Cargo Aircraft Max net Qty	75Kg
Cargo Aircraft Packing Instructions	203
Cargo Aircraft Max net Qty	150Kg
Special Provisions	A98, A145, A167, A802
Emergency Response Guidebook (ERG) Code	2L
Labels	
Labels	2.2

14.4 Packing group

Packing group

14.5 Environmental hazards

Environmental hazards Not classified as a Marine Pollutant.

14.6 Special precautions for user

Special precautions for user Not known.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No information available

SECTION 15: REGULATORY INFORMATION

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

United Kingdom Regulations - Authorisations and/or Restrictions On Use

UK REACH Candidate List of Substances of Very High Concern for Authorisation Not listed

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UK REACH Authorisation List (Annex XIV) list of substances subject to authorisation	Not listed
UK REACH Restrictions List (Annex XVII) Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	Dichloromethane (75-09-2), Alcohols, C12-13, ethoxylated (66455-14-9)
UK REACH Rolling Action Plan (RAP)	Not listed
The Persistent Organic Pollutants Regulations 2007 (SI 2007/3106) as amended	Not listed
The Ozone-Depleting Substances and Fluorinated Greenhouse Gases (Amendment etc.) (EU Exit) Regulations 2019 (SI 2019/583)	Not listed
The Prior Informed Consent (PIC) Regulations concerning the export and import of hazardous chemicals SI2008/2108 as amended	Not listed

European Regulations - Authorisations and/or Restrictions On Use

Community Rolling Action Plan (CoRAP)	Dichloromethane (75-09-2)

15.2 Chemical Safety Assessment

United Kingdom	Not applicable.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16

LEGEND

Hazard Pictogram(s)

GHS08

GHS07

GHS04: GHS: Gas cylinder

Hazard classification

Aerosol 3 : Aerosol, Category 3

Press. Gas (Comp.) : Gases under pressure, Compressed gas

Skin Irrit. 2 : Skin corrosion/irritation, Category 2

Eye Irrit. 2 : Serious eye damage/irritation, Category 2

STOT SE 3 : Specific target organ toxicity — single exposure, Category 3

Carc. 2 : Carcinogenicity, Category 2

Hazard Statement(s)

H229: Pressurised container: May burst if heated.

H280: Contains gas under pressure; may explode if heated.

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	H315: Causes skin irritation.
	H319: Causes serious eye irritation.
	H336: May cause drowsiness or dizziness.
	H351: Suspected of causing cancer.
Precautionary Statement(s)	P201: Obtain special instructions before use.
	P202: Do not handle until all safety precautions have been read and understood.
	P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P251: Do not pierce or burn, even after use.
	P261: Avoid breathing mist/vapours/spray.
	P264: Wash hands and exposed skin thoroughly after handling.
	P271: Use only outdoors or in a well-ventilated area.
	P280: Wear protective gloves/protective clothing/eye protection/face protection.
	P302+P352: IF ON SKIN: Wash with plenty of water.
	P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P308+P313: IF exposed or concerned: Get medical advice/attention.
	P312: Call a POISON CENTRE/doctor if you feel unwell.
	P321: Specific treatment (see Medical Advice on this label).
	P332+P313: If skin irritation occurs: Get medical advice/attention.
	P337+P313: If eye irritation persists: Get medical advice/attention.
	P362+P364: Take off contaminated clothing and wash it before reuse.
	P403+P233: Store in a well-ventilated place. Keep container tightly closed.
	P405: Store locked up.
	P410+P412: Protect from sunlight. Do not expose to temperatures exceeding 50°C/ 122°F.
	P501: Dispose of contents in accordance with local, state or national legislation.
Acronyms	ATE : Acute Toxicity Estimate
	CAS : Chemical Abstracts Service
	DNEL : Derived No Effect Level
	EC : European Community
	EINECS : European Inventory of Existing Commercial Chemical Substances
	LTEL : Long term exposure limit
	PBT : Persistent, Bioaccumulative and Toxic
	PNEC : Predicted No Effect Concentration
	REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals
	STEL : Short term exposure limit
	STOT : Specific Target Organ Toxicity
	vPvB : very Persistent and very Bioaccumulative

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Key literature references and sources for data used to compile the SDS	GB CLP Regulation, UK SI 2019/720 and UK SI 2020/1567
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