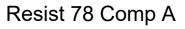
Conforms to UN GHS (Rev.7) (2017)

SAFETY DATA SHEE



Section 1. Identification	
Product name	: Resist 78 Comp A
Product code	: 678
Product description	: Paint.

Product type	
Other means of	
identification	

: Liquid.

: Not available.

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

Use in coatings - Industrial use Use in coatings - Professional use

Supplier's details	: Jotun Paints Co LLC, P.O.Box 672-C.P.O, Postal Code - 111 Sultanate of Oman Tel: 00968-626100 Fax:00968-626105 SDSJotun@jotun.com
Emergency telephone	: Jotun AS, Norway
number	+47 33 45 70 00

Section 2. Hazards identification

Classification of the substance or mixture	: FLAMMABLE LIQUIDS - Category 2 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A
GHS label elements	
Hazard pictograms	
Signal word	: Danger.
Hazard statements	: H225 - Highly flammable liquid and vapour. H315 - Causes skin irritation. H319 - Causes serious eye irritation.
Precautionary statements	·
Prevention	 P280 - Wear protective gloves. Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Response	 P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
Storage	: Not applicable.

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Section 2. Hazards identification

: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not : None known. result in classification

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of	: Not available.
identification	

CAS number/other identifiers

CAS number	: Not applicable.
EC number	: Mixture.
Product code	: 678

Ingredient name	%	CAS number
ethanol	≥10 - ≤25	64-17-5
2-butoxyethanol	≤11	111-76-2
xylene	≤7.5	1330-20-7
tetraethyl silicate	≤6.6	78-10-4
1-methoxy-2-propanol	≤10	107-98-2
ethylbenzene	≤2.5	100-41-4

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures			
Eye contact	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.		
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.		
Skin contact	: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.		
Ingestion	: Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.		
Most important symptoms/effects, acute and delayed			
Potential acute health effects			

Eye contact	: Causes serious eye irritation.	
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Date of issue/Date of revision

2/11

Disposal

Section 4. First aid measures

Inhalation	: No known significant effects or critical hazards.
Skin contact	: Causes skin irritation.
Ingestion	: No known significant effects or critical hazards.
Over-exposure signs/sym	<u>otoms</u>
Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: No specific data.
Skin contact	: Adverse symptoms may include the following: irritation redness
Ingestion	: No specific data.
Indication of immediate me	dical attention and special treatment needed, if necessary
Notes to physician	 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatment.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media
Exunguishing media

: Use dry chemical, CO ₂ , water spray (fog) or foam.
: Do not use water jet.
 Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
: Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides
: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
 Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency	: No action shall be taken involving any personal risk or without suitable training.
personnel	Evacuate surrounding areas. Keep unnecessary and unprotected personnel from
	entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and material for con	tai	inment and cleaning up
Small spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spill product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	:	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	:	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
ethanol	ACGIH TLV (United States, 1/2022).
	STEL: 1000 ppm 15 minutes.
2-butoxyethanol	ACGIH TLV (United States, 1/2022).
	TWA: 20 ppm 8 hours.
xylene	ACGIH TLV (United States, 1/2022)
	STEL: 651 mg/m ³ 15 minutes.
	TWA: 434 mg/m ³ 8 hours.
	TWA: 20 ppm 8 hours.
tetraethyl silicate	ACGIH TLV (United States, 1/2022)
	TWA: 85 mg/m ³ 8 hours.
	TWA: 10 ppm 8 hours.
1-methoxy-2-propanol	ACGIH TLV (United States, 1/2022)
	STEL: 369 mg/m ³ 15 minutes.
	STEL: 100 ppm 15 minutes.
	TWA: 184 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
ethylbenzene	ACGIH TLV (United States, 1/2022)
Suryidenzene	Ototoxicant. Notes: K
	TWA: 20 ppm 8 hours. Form:
	r w.A. 20 ppin o nouis. r onn.

controls	ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
Individual protection measure	<u>S</u>
Hygiene measures	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Safety eyewear complying to ISO 16321-1:2022 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
Skin protection	
Hand protection	 There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. The breakthrough time must be greater than the end use time of the product. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Section 8. Exposure controls/personal protection

	Wear suitable gloves tested to ISO 374-1:2016. Recommended, gloves(breakthrough time) > 8 hours: Viton® (> 0.7 mm), 4H/Silver Shield® (> 0.07 mm), Teflon (> 0.35 mm) Not recommended, gloves(breakthrough time) < 1 hour: PVC (> 0.5 mm) May be used, gloves(breakthrough time) 4 - 8 hours: nitrile rubber (> 0.4 mm), neoprene (> 0.35 mm), butyl rubber (> 0.4 mm), polyvinyl alcohol (PVA) (> 0.3 mm)
Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
Other skin protection	 Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	: If workers are exposed to concentrations above the exposure limit, they must use a respirator according to EN 140. Use respiratory mask with charcoal and dust filter when spraying this product, according to EN 14387(as filter combination A2-P2). In confined spaces, use compressed-air or fresh-air respiratory equipment. When use of roller or brush, consider use of charcoalfilter.

Section 9. Physical and chemical properties

<u>Appearance</u>		
Physical state	quid.	
Colour	rey	
Odour	haracteristic.	
Odour threshold	ot applicable.	
рН	ot applicable.	
Melting point	ot applicable.	
Boiling point	36°C (>96.8°F)	
Flash point	osed cup: 16°C (60.8°F)	
Evaporation rate	ghest known value: 1.7 (ethanol) Weighted average: 1.03compared cetate	l with butyl
Flammability (solid, gas)	ot applicable.	
Lower and upper explosive (flammable) limits	8 - 23%	
Vapour pressure	ghest known value: 5.7 kPa (43 mm Hg) (at 20°C) (ethanol). Weigh 81 kPa (21.08 mm Hg) (at 20°C)	ited average:
Vapour density	ghest known value: 7.22 (Air = 1) (tetraethyl silicate). Weighted av .ir = 1)	erage: 3.18
Density	17 g/cm³	
Solubility	soluble in the following materials: cold water and hot water.	
Partition coefficient: n- octanol/water	ot available.	
Auto-ignition temperature	owest known value: 222°C (431.6°F) (tetraethyl silicate).	
Decomposition temperature	ot available.	
Viscosity	nematic (40°C): >20.5 mm²/s (>20.5 cSt)	

Section 10. Stability and reactivity

: No specific test data related to reactivity available for this product or its ingredients.
: The product is stable.
: Under normal conditions of storage and use, hazardous reactions will not occur.
: Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
: Reactive or incompatible with the following materials: oxidising materials
: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ethanol	LC50 Inhalation Vapour	Rat	124700 mg/m ³	4 hours
2-butoxyethanol	LD50 Oral	Guinea pig - Male, Female	1414 mg/kg	-
	LD50 Oral	Rat - Male, Female	1300 mg/kg	-
xylene	LC50 Inhalation Vapour	Rat	20 mg/l	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
	TDLo Dermal	Rabbit	4300 mg/kg	-
1-methoxy-2-propanol	LD50 Dermal	Rabbit	13 g/kg	-
3 1 1	LD50 Oral	Rat	6600 mg/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat - Male	17.8 mg/l	4 hours
2	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanol	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
2-butoxyethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
tetraethyl silicate	Eyes - Mild irritant	Mammal - species unspecified	-	-	-
1-methoxy-2-propanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-

Sensitisation

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Section 11. Toxicological information

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation
tetraethyl silicate	Category 3	-	Respiratory tract irritation
1-methoxy-2-propanol	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Name		Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs

Aspiration hazard

Name	Result
	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on likely routes of exposure	1	Not available.
Potential acute health effects	5	
Eye contact	:	Causes serious eye irritation.
Inhalation	:	No known significant effects or critical hazards.
Skin contact	:	Causes skin irritation.
Ingestion	:	No known significant effects or critical hazards.
Symptoms related to the phy	<u>'sic</u>	cal, chemical and toxicological characteristics
Eye contact	:	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	1	No specific data.
Skin contact	:	Adverse symptoms may include the following: irritation redness
Ingestion	1	No specific data.
Delayed and immediate effec	ts	as well as chronic effects from short and long-term exposure
<u>Short term exposure</u>		
Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.
Potential chronic health eff	ects

Date of issue/Date of revision

Long term exposure

: 07.03.2023 Date of previous issue

Section 11. Toxicological information

Not available.

General	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	12000 mg/kg
Dermal	16858.24 mg/kg
Inhalation (vapours)	23.24 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2-butoxyethanol	Acute EC50 1000 mg/l Fresh water Acute LC50 1000 mg/l Marine water	Daphnia - Daphnia magna Crustaceans - Chaetogammarus marinus - Young	48 hours 48 hours
xylene	Acute LC50 8500 μg/l Marine water	Crustaceans - Palaemonetes	48 hours
ethylbenzene	Acute LC50 13400 μg/l Fresh water Acute EC50 7700 μg/l Marine water Acute EC50 2.93 mg/l Acute LC50 4.2 mg/l	Fish - Pimephales promelas Algae - Skeletonema costatum Daphnia Fish	96 hours 96 hours 48 hours 96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene ethylbenzene	-		Readily Readily

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
ethanol	-0.35	-	low
2-butoxyethanol	0.81	-	low
xylene	3.12	8.1 to 25.9	low
tetraethyl silicate	3.18	-	low
1-methoxy-2-propanol	<1	-	low
ethylbenzene	3.6	-	low

Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods

: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	ADR/RID	IMDG	IATA
UN number	UN1263	UN1263	UN1263
UN proper shipping name	Paint	Paint	Paint
Transport hazard class(es)	3	3	3
Packing group	11	II	II
Environmental hazards	No.	No.	No.
Additional information	-	Emergency schedules F-E, S-E	-

Additional information		
ADR/RID	:	Hazard identification number 33 Special provisions 640 (C) Tunnel code (D/E)
IMDG Special processions for upon		Emergency schedules F-E, <u>S-E</u>
Special precautions for user	•	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according : Not available. to IMO instruments

Section 15. Regulatory information

Safety, health and environmental regulations specific for the product	: No known specific national and/or regional regulations applicable to this product (including its ingredients).
International regulations	
Chemical Weapon Convent	on List Schedules I, II & III Chemicals
Not listed.	

Montreal Protocol

Date of issue/Date of revision

Section 15. Regulatory information

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals Not listed.

Section 16. Other information

<u>History</u>	
Date of printing	: 07.03.2023
Date of issue/Date of revision	: 07.03.2023
Date of previous issue	: 07.03.2023
Version	: 2.01
Key to abbreviations	 ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Internediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations
Poforoncos	• Not available

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.