

# ISOPA TDI / MDI BULK DISCHARGE & STORAGE ASSESSMENT

## ISOPA MDI / TDI BULK DISCHARGE & STORAGE

Version April 2016



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### Customer information

Assessed company:

Level 1	Standard / recommended according ISOPA guidelines
Level 2	Not in line with ISOPA Bulk
Level 3	Improvement highly recommended

Assessment of storage containing  MDI  
 TDI

1	Name	
2	Street + number	
3	Postal / Zip code	
4	City	
5	County	
6	Country	
7	Contact person	
8	Telephone number	
9	E-mail address	
10	Signature	

Assessor(s):

11	Name	
12	Company	
13	Name	
14	Company	
15	Date of assessment: dd-mm-yyyy	
16	Signature	

# ISOPA TDI / MDI BULK DISCHARGE & STORAGE ASSESSMENT

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### General Information

Assessed company location is certified for:

17	Quality	<input type="checkbox"/> ISO 9001 <input type="checkbox"/> ISO / TS 16949 <input type="checkbox"/> QS-9000 / VDA 6.1
18	Environment and/or Health & Safety	<input type="checkbox"/> ISO 14001 <input type="checkbox"/> EMAS <input type="checkbox"/> SCC / VCA <input type="checkbox"/> OHSAS 18001
19	Assessed company location falls within the scope of the Seveso II (96/82/EC ) or III Directive (2012/18/EU) or a national equivalent legislation?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown

### EHS

20	Visibility of EHS information	<input checked="" type="checkbox"/> Site shows clearly visible information about EHS subjects	<input type="checkbox"/> Some information visible at offices	<input type="checkbox"/> No information visible
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### Safety Data Sheet

21	Availability of latest version of SDS from supplying company	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
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Comments:

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### General Information

#### Location

22	Access road to customer location	<input type="radio"/> Straight / two lanes	<input type="radio"/> Narrow / two lanes without additional procedure	<input type="radio"/> Makes sharp bend and is narrow without additional procedure
23	Customer location	<input type="radio"/> Location is signposted and easy to find	<input type="radio"/> Location difficult to find	
24	Location of storage and production facility	<input type="radio"/> Industrial area	<input type="radio"/> Populated area with logistics and society procedures in place	<input type="radio"/> Populated area without logistics and society procedures in place

#### Housekeeping

25	Signs of previous spillage at discharge location	<input type="radio"/> No signs	<input type="radio"/> Some sign of spillage visible	<input type="radio"/> Several spillages visible
26	Signs of previous spillage at storage location	<input type="radio"/> No signs	<input type="radio"/> Some sign of spillage visible	<input type="radio"/> Several spillages visible
27	Housekeeping at entry of site	<input type="radio"/> Clean and tidy	<input type="radio"/> Untidy	<input type="radio"/> Dirty
28	Housekeeping discharge area	<input type="radio"/> Clean and tidy	<input type="radio"/> Untidy	<input type="radio"/> Dirty
29	Housekeeping storage location	<input type="radio"/> Clean and tidy	<input type="radio"/> Untidy	<input type="radio"/> Dirty

**Comments:**

# ISOPA TDI / MDI BULK DISCHARGE & STORAGE ASSESSMENT

## Protection and Hygiene

### Personal Protective Equipment

30	Goggles (MDI only)	<input checked="" type="radio"/> Used	<input checked="" type="radio"/> Available	<input checked="" type="radio"/> Not Available or safety glasses
31	Safety helmet	<input checked="" type="radio"/> Used	<input checked="" type="radio"/> Available	<input checked="" type="radio"/> Not Available
32	Chemical suit ( TDI ) - Overall (MDI)	<input checked="" type="radio"/> Used	<input checked="" type="radio"/> Available	<input checked="" type="radio"/> Not Available
33	Suitable impervious gloves	<input checked="" type="radio"/> Used	<input checked="" type="radio"/> Available	<input checked="" type="radio"/> Not Available
34	safety harness if no gantry available and anchor point	<input checked="" type="radio"/> Used		<input checked="" type="radio"/> Not available
35	Safety shoes / boots	<input checked="" type="radio"/> Used	<input checked="" type="radio"/> Available	<input checked="" type="radio"/> Not Available
36	Respiratory equipment/ face mask with appropriate filter for routine use (TDI only)	<input checked="" type="radio"/> Used in critical phases during unloading	<input checked="" type="radio"/> Available close to discharge point	<input checked="" type="radio"/> Not available
37	Escape Filter (for MDI)	<input checked="" type="radio"/> Directly available	<input checked="" type="radio"/> Available close to discharge point	<input checked="" type="radio"/> Not available
38	Additional respiratory equipment/ Self contained breathing apparatus for emergency	<input checked="" type="radio"/> Available and close to discharge point / storage tank	<input checked="" type="radio"/> Available within 15 min.	<input checked="" type="radio"/> Not available
39	System in place to manage filter lifetime	<input checked="" type="radio"/> Yes		<input checked="" type="radio"/> No

**Comments:**

# ISOPA MDI / TDI BULK DISCHARGE & STORAGE ASSESSMENT

## Protection and Hygiene

### Personal hygiene

#### Segregation of areas

40	Cloth changing / washing area	<input checked="" type="radio"/>	Segregated	<input type="radio"/>	Not segregated
41	Eating / drinking area	<input checked="" type="radio"/>	Segregated	<input type="radio"/>	Not segregated
42	Smoking area	<input checked="" type="radio"/>	Segregated	<input type="radio"/>	Not segregated

### Industrial hygiene

43	Periodic monitoring of vapours for storage facilities indoor	<input checked="" type="radio"/>	Frequent monitoring	<input type="radio"/>	Incidental or no monitoring
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**Comments:**

# ISOPA TDI / MDI BULK DISCHARGE & STORAGE ASSESSMENT

## Reception and Documentation

### Reception

44	Location of reception	<input checked="" type="radio"/> At the gate	<input checked="" type="radio"/> At the discharge location	
45	Information about local procedures and instructions	<input checked="" type="radio"/> Clearly indicated and / or explained	<input checked="" type="radio"/> Instructions given but not clear	<input checked="" type="radio"/> No information given
46	Checking documents	<input checked="" type="radio"/> Delivery documents are checked at the gate and at discharge location	<input checked="" type="radio"/> Delivery documents are checked at discharge location	<input checked="" type="radio"/> No checks on documents are made
47	Identity check of driver	<input checked="" type="radio"/> Always checked	<input checked="" type="radio"/> Checked on ad-hoc basis	<input checked="" type="radio"/> Not checked
48	ISOPA driver certificates	<input checked="" type="radio"/> ISOPA driver certificates are checked	<input checked="" type="radio"/> ISOPA driver certificates are checked on ad-hoc basis	<input checked="" type="radio"/> ISOPA driver certificates are not checked

### Free space in storage tank

49	Check delivery volume against free storage space	<input checked="" type="radio"/> Checks are always done		<input checked="" type="radio"/> No checks are done
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### Cross contamination

50	Product identity check	<input checked="" type="radio"/> Checks are done on paper versus equipment	<input checked="" type="radio"/> Checks are only done on paper	<input checked="" type="radio"/> No checks are done
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### Site traffic

51	Routing on site	<input checked="" type="radio"/> Routing instructions given	<input checked="" type="radio"/> Limited routing signs available	<input checked="" type="radio"/> No routing instructions given
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### Sampling

52	Sample taking	<input checked="" type="radio"/> Samples are not taken	<input checked="" type="radio"/> Samples are taken from dedicated sampling point of the customer by the operator	<input checked="" type="radio"/> Samples are taken from road tanker, hose or samples taken by the driver
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Comments:

# ISOPA MDI / TDI BULK DISCHARGE & STORAGE ASSESSMENT

## Incident Management

### Product knowledge

53	Covering and educating on product specific risks and potential hazards	<input checked="" type="radio"/>	Regular training of staff, particularly in case of new employment or new products	<input type="radio"/>	Occasional training	<input type="radio"/>	No specific training
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### Emergency instructions

54	Emergency scenario developed and present (including PPE, waste disposal)	<input checked="" type="radio"/>	Yes	<input type="radio"/>	Yes but needs further clarification ( PPE, waste disposal ..)	<input type="radio"/>	No
55	Instruction for spillage	<input checked="" type="radio"/>	Clear instructions in the case of spillage available	<input type="radio"/>	Some info is available	<input type="radio"/>	No instructions available
56	Instructions for fire and other emergencies	<input checked="" type="radio"/>	Clear instructions available	<input type="radio"/>	Some info is available	<input type="radio"/>	No instructions available
57	Driver not involved in cleaning or emergency situations	<input checked="" type="radio"/>	Procedure in place	<input type="radio"/>		<input type="radio"/>	Driver to participate

### Emergency stop

58	Emergency stop for discharge	<input checked="" type="radio"/>	Emergency stop for discharge is automatic incl. valve / pushing button	<input type="radio"/>	Emergency stop via closing valve / pushing button	<input type="radio"/>	No emergency stops available
59	Access to emergency stop	<input checked="" type="radio"/>	Easy, unrestricted	<input type="radio"/>	Difficult	<input type="radio"/>	Emergency stop not accessible
60	Distance to emergency stop from vehicle	<input checked="" type="radio"/>	From 5 - 15 m	<input type="radio"/>	Less than 5 or more than 15 m	<input type="radio"/>	

### Emergency exits

61	Emergency exits available	<input checked="" type="radio"/>	2 or more emergency exits exist in all areas	<input type="radio"/>	Only one emergency exit exists	<input type="radio"/>	No emergency exit available
62	Emergency exits clearly marked	<input checked="" type="radio"/>	Yes and well lit	<input type="radio"/>		<input type="radio"/>	No

### Emergency alarms

63	Fire alarm	<input checked="" type="radio"/>	Present and periodically tested	<input type="radio"/>	Not present	<input type="radio"/>	
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**Comments:**

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### Incident management

#### Emergency tools

64	Fire extinguishers	<input type="checkbox"/>	At least two fire extinguishers are present	<input type="checkbox"/>	Only one fire extinguisher present	<input type="checkbox"/>	No fire extinguishers present
65	Spillage absorbant	<input type="checkbox"/>	More than 200 litres of suitable absorbent present	<input type="checkbox"/>	Less than 200 litres of suitable absorbent present	<input type="checkbox"/>	No suitable absorbent available
66	Spillage decontaminant	<input type="checkbox"/>	More than 200 litres of suitable decontaminant present	<input type="checkbox"/>	Less than 200 litres of suitable decontaminant present	<input type="checkbox"/>	No suitable decontaminant present
67	Wind vane	<input type="checkbox"/>	well visible at unloading location	<input type="checkbox"/>	not in place	<input type="checkbox"/>	

#### Emergency organisation

68	Emergency response organisation	<input type="checkbox"/>	Organisation present ER exercises at least once a year for isocyanates	<input type="checkbox"/>	Organisation present ER exercise once a year	<input type="checkbox"/>	Organisation not present or No evidence of ER exercise
69	Reporting of incidents	<input type="checkbox"/>	Reporting of incidents done on a formal basis	<input type="checkbox"/>	No regular reporting done	<input type="checkbox"/>	No reporting done
70	Professional medical service available	<input type="checkbox"/>	Yes, on site - response time < 10 minutes and well informed about MDI/TDI	<input type="checkbox"/>	Local, response time > 10 minutes	<input type="checkbox"/>	

Comments:



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### Incident management

#### Emergency showers / eye wash facility

71	Emergency shower available	<input type="checkbox"/> Yes		<input type="checkbox"/> No
72	Eye wash facility available	<input type="checkbox"/> Yes		<input type="checkbox"/> No
73	Distance safety shower(s) / Eye wash facility from point of discharge	<input type="checkbox"/> Less than 10 m , easy access	<input type="checkbox"/> Between 10 and 20 m	<input type="checkbox"/> More than 20 m and / or only accessible via several obstacles
74	Frost / Temperature protection	<input type="checkbox"/> Safety shower is frost protected Temperature of water does not give a risk to health	<input type="checkbox"/>	<input type="checkbox"/> No frost nor too high water tempertaure protection
75	Maintenance of safety shower / Eye wash facility	<input type="checkbox"/> Signs of regular maintenance are visible	<input type="checkbox"/>	<input type="checkbox"/> No sign of any maintenance
76	Safety shower and eye wash facility tested for 'Legionella'	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

**Comments:**

# ISOPA MDI / TDI BULK DISCHARGE & STORAGE ASSESSMENT

## Discharge area

### General

77	Discharge area under cover	<input checked="" type="radio"/>	Roof is present Discharge area is well protected	<input type="radio"/>	Some protection is present	<input type="radio"/>	No cover or protection/ Height to less
78	Quality of surface discharge area	<input checked="" type="radio"/>	Liquid tight , test on a regular basis	<input type="radio"/>	Slightly permeable	<input type="radio"/>	Permeable

### Rain water drainage

79	Rain water drainage	<input checked="" type="radio"/>	Closed sewer	<input type="radio"/>	Open sewer	<input type="radio"/>	No drainage
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### Collection of spilled product

80	Draining direction of spillage	<input checked="" type="radio"/>	Away from vehicle	<input type="radio"/>	Partially away from vehicle	<input type="radio"/>	Around vehicle
81	Containment of spillage	<input checked="" type="radio"/>	Containment not connected with sewer system	<input type="radio"/>	Containment with closed valve / drain to sewer system	<input type="radio"/>	No containment
82	Containment of spillage	<input checked="" type="radio"/>	Containment sufficient for one full tank sewer system	<input type="radio"/>		<input type="radio"/>	containment less than one full truck

### Vehicle

83	Position of bulk vehicle	<input checked="" type="radio"/>	Horizontal	<input type="radio"/>	inclination	<input type="radio"/>	
84	Vehicle movement protection	<input checked="" type="radio"/>	Wheel chocks (2) used	<input type="radio"/>		<input type="radio"/>	No wheel chocks used
85	Prevent driving off with connected hoses	<input checked="" type="radio"/>	securing keys / using a barrier / stop sign	<input type="radio"/>	nothing in place	<input type="radio"/>	
86	Vehicle access / exit	<input checked="" type="radio"/>	No restrictions	<input type="radio"/>	Access road has width of at least one vehicle Reversing necessary	<input type="radio"/>	No access road

**Comments:**

# ISOPA MDI / TDI BULK DISCHARGE & STORAGE ASSESSMENT

## Discharge area

### Instructions / management

87	Availability discharge instructions	<input checked="" type="radio"/> Available , displayed and trained		<input checked="" type="radio"/> Not available or not displayed
88	Unloading operation is done according to a written check list	<input checked="" type="radio"/> Yes, always used	<input checked="" type="radio"/> Available but not regularly used	<input checked="" type="radio"/> No checklist available
89	Type of discharge instructions	<input checked="" type="radio"/> Using pictures/ icons/ supported by text in various languages and be displayed at discharge location	<input checked="" type="radio"/> using text in several languages and be displayed at discharge location	<input checked="" type="radio"/> only local language and not displayed at discharge location
90	Traffic management plan	<input checked="" type="radio"/> Management plan in place		<input checked="" type="radio"/> No management plan

# ISOPA MDI / TDI BULK DISCHARGE & STORAGE ASSESSMENT

## Discharge installation

### General

91	Separated unloading for diisocyanates and other chemicals	<input checked="" type="radio"/>	Yes	<input type="radio"/>	No
92	Customer is prepared for top discharging	<input checked="" type="radio"/>	Yes	<input type="radio"/>	No

### Labeling

93	Discharge connections	<input checked="" type="radio"/>	All connections are clearly labelled and visible	<input type="radio"/>	Some labelling is present but not very clear	<input type="radio"/>	No labelling is present
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### Connectors

94	Coupling	<input checked="" type="radio"/>	DN50 flange	<input type="radio"/>	Other DN and customer has adaptors to DN50	<input type="radio"/>	Other DN and customer has no adaptors
95	Connection piece(s)	<input checked="" type="radio"/>	No connection pieces are used	<input type="radio"/>	One or more connection piece is used		
96	Risk of mixing with other product(s)	<input checked="" type="radio"/>	No			<input type="radio"/>	Yes

**Comments:**

# ISOPA MDI / TDI BULK DISCHARGE & STORAGE ASSESSMENT

## Discharge installation

### Discharge method

97	Type of discharge	<input checked="" type="radio"/> Pump	<input type="radio"/> Nitrogen or dry air	<input type="radio"/> Compressed air from truck
98	Pump type	<input checked="" type="radio"/> sealless type	<input type="radio"/> Mechanical seal pump	
99	Vapour return line if pump discharge	<input checked="" type="radio"/> Is present, of good quality and is routinely used	<input type="radio"/> Is present but size and/or quality is suspect	<input type="radio"/> No vapour return line present
100	Vapour flow rate monitoring if vapour return line present	<input checked="" type="radio"/> Is present and stops discharging in case of no indication of flow	<input type="radio"/> Is present or manually monitored	<input type="radio"/> No vapour flow rate monitoring present and no other control to adequacy of vapour return line
101	Pressure discharge	<input checked="" type="radio"/> Protection for overpressure P max =		<input type="radio"/> No overpressure protection
102	Discharge by pressure	<input checked="" type="radio"/> Pressure in the container released to 0.1 Bar max via the storage tank		<input type="radio"/> No pressure release or by venting the container to the atmosphere

### Discharge platform (fix or mobile)

103	Construction	<input checked="" type="radio"/> Discharge platform with stairs and fall protection or 360 ° cage	<input type="radio"/> Discharge platform without fall protection or if no platform safety harness and anchor point available	<input type="radio"/> No platform available/ doubts about fall protection
104	Access to top of bulk equipment	<input checked="" type="radio"/> Safe access without restrictions	<input type="radio"/> Narrow access	<input type="radio"/> Acces via bulk equipment without fall protection

### Discharge device

105	Way of discharge	<input checked="" type="radio"/> Unloading arm	<input type="radio"/> Flexible hose	
106	Hose lifting (if hose )	<input checked="" type="radio"/> Lifting device which can be operated by one person	<input type="radio"/> Lifting device to be operated by two persons	<input type="radio"/> No lifting device present
107	Hose length	<input checked="" type="radio"/> Hose length is functional for discharge application	<input type="radio"/> Slightly short / long hose resulting in unnecessary bending or manoeuvring with vehicle	<input type="radio"/> Hose length above 10 m or too short to allow safe connection

**Comments:**

# ISOPA TDI / MDI BULK DISCHARGE & STORAGE ASSESSMENT

## Discharge installation

### Discharge device

108	Loading arm or hose size	<input checked="" type="radio"/> 2 inch	<input type="radio"/> Not 2 inch	
109	Hose ownership ( if hose )	<input checked="" type="radio"/> Customer owned		<input type="radio"/> Haulier owned
110	Hose usage	<input checked="" type="radio"/> Dedicated to product		<input type="radio"/> Non-dedicated to product
111	Hose quality (inside & outside)	<input checked="" type="radio"/> Good, both inside and outside/ hose material fits to product	<input type="radio"/> Some signs of inside fouling, doubts about hose material	<input type="radio"/> Fouled and / or damaged / unsuitable hose material
112	Hose capping	<input checked="" type="radio"/> Hose capped with blind flange on both sides or fixed connected with blind flange on the unmounted side	<input type="radio"/> Hose capping insufficiently	<input type="radio"/> Hose not capped
113	Hose storage	<input checked="" type="radio"/> Hose stored inside under dry conditions	<input type="radio"/> Hose stored under cover	<input type="radio"/> Hose stored in open air
114	Hose inspection (visual)	<input checked="" type="radio"/> Hose shows signs of regular inspection (tagging)	<input type="radio"/> Hoses are inspected but evidence is not directly visible	<input type="radio"/> No hose inspection takes place
115	Pressure testing of hose connections to the truck/container prior to discharge	<input checked="" type="radio"/> Done according to procedure and testing using leak detection tool (e.g. Leak spray, pressure gauche)	<input type="radio"/>	<input type="radio"/> No pressure testing

### Vapour return hose (for pump discharge only)

116	Hose size	<input checked="" type="radio"/> 2 inch (DN50)	<input type="radio"/> Between 1 and 2 inch (DN25 and 50)	<input type="radio"/> Lower or equal than 1 inch (DN25)
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### Lighting

117	Lighting at discharge location	<input checked="" type="radio"/> Good		<input type="radio"/> Insufficient
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### Cooperation driver/operator

118	Connections / disconnections	<input checked="" type="radio"/> Done by the operator	<input type="radio"/> The driver supports the operator but not active involved	<input type="radio"/> Done by driver
119	Presence during discharge	<input checked="" type="radio"/> Driver not	<input type="radio"/> Present but has no active role	<input type="radio"/> Driver has role in connecting /disconnecting hoses

**Comments:**

# ISOPA TDI / MDI BULK DISCHARGE & STORAGE ASSESSMENT

## Storage tank

### Size

120	Storage tank size	<input checked="" type="radio"/>	More than one truck load	<input type="radio"/>	Less than one truck load
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### Containment

121	Bundling	<input checked="" type="radio"/>	Bund is present and capable to store largest tank volume. Bund has no cracks. Diisocyanates and other chemicals in separate bund	<input type="radio"/>	Bund is present but doubts about bund content. Bund has cracks. Diisocyanates and other chemicals tanks in one bund	<input type="radio"/>	No bunding present
122	Draining of bunded area	<input checked="" type="radio"/>	Draining of bund via installed pump	<input type="radio"/>	Draining via (normally closed) valve	<input type="radio"/>	No containment

### Equipment

123	Quality of tank	<input checked="" type="radio"/>	New or well maintained	<input type="radio"/>	Some signs of lack of maintenance of older equipment	<input type="radio"/>	Poor quality with lack of maintenance
124	Quality of lines	<input checked="" type="radio"/>	New or well maintained	<input type="radio"/>	Some signs of lack of maintenance of older equipment	<input type="radio"/>	Poor quality with lack of maintenance
125	Quality of instrumentation	<input checked="" type="radio"/>	New or well maintained	<input type="radio"/>	Some signs of lack of maintenance of older equipment	<input type="radio"/>	Poor quality with lack of maintenance

### Temperature

126	Measurement	<input checked="" type="radio"/>	Temperature measurement inside tank Clear readability	<input type="radio"/>	External measurement	<input type="radio"/>	No measurement
127	Temperature control	<input checked="" type="radio"/>	Temperature measurement inside tank with automatic control or tank in heated storage room	<input type="radio"/>	Manual control of temperature	<input type="radio"/>	No temperature control
128	Heat transfer medium	<input checked="" type="radio"/>	Suitable electrical tracing or oil heating	<input type="radio"/>	water with safety heat exchanger	<input type="radio"/>	water with standard heat exchanger

### Comments:

# ISOPA MDI / TDI BULK DISCHARGE & STORAGE ASSESSMENT

## Storage tank

### Circulation / mixing

129	Circulation	<input checked="" type="radio"/> Circulation by pump	<input type="radio"/> Circulation by agitator	<input type="radio"/> No mixing possible
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### Pressure

130	Measurement	<input checked="" type="radio"/> Pressure indication Visible from discharge location	<input type="radio"/> Pressure indication Only visible after climbing to top of storage tank	<input type="radio"/> No pressure indication available
131	Control	<input checked="" type="radio"/> Over and under pressure control	<input type="radio"/> No control	
132	Protection	<input checked="" type="radio"/> Safety equipment for under and overpressure is installed and well maintained		<input type="radio"/> No protection installed
133	Alarm	<input checked="" type="radio"/> Present		<input type="radio"/> Not present

### Vapour quality

134	Inlet gas quality	<input checked="" type="radio"/> Nitrogen / dry air with demonstrated quality	<input type="radio"/> Doubt about quality of inlet gas	<input type="radio"/> Inlet of ambient air
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### Building

135	Ventilation of storage building	<input checked="" type="radio"/> Good ventilation of building	<input type="radio"/> Some ventilation exists but effect doubted	<input type="radio"/> No ventilation present
136	Lighting	<input checked="" type="radio"/> Good		<input type="radio"/> Insufficient

### Piping

137	Labeling	<input checked="" type="radio"/> All pipes properly labeled with product name and flow direction	<input type="radio"/> No labeling	
138	Condition	<input checked="" type="radio"/> In good condition		<input type="radio"/> In bad condition
139	Insulation	<input checked="" type="radio"/> In good condition	<input type="radio"/> Insulation not present	

**Comments:**



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## Storage tank

### Pump

140	Pump type	<input checked="" type="radio"/>	sealless type - well maintained	<input type="radio"/>	Some sign of lack of maintenance
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### Filtration

141	Filter	<input checked="" type="radio"/>	Sufficient size filter present and of good quality	<input type="radio"/>	Bag filter for polymeric isocyanates or filter types which not consider viscosity and product characteristics	<input type="radio"/>	No filter present
142	Filter(s) cleaned / changed frequently	<input checked="" type="radio"/>	Yes	<input type="radio"/>	No		

### Level

143	Indication	<input checked="" type="radio"/>	Reliable level indication	<input type="radio"/>	No level indication		
144	Side glass level indication	<input checked="" type="radio"/>	Not present	<input type="radio"/>	Protected side glass present	<input type="radio"/>	Unprotected side glass present
145	High level protection	<input checked="" type="radio"/>	High level alarm via level instrument and independent level switch	<input type="radio"/>	High level alarm via level instrument	<input type="radio"/>	No high level alarm
146	High level alarm function	<input checked="" type="radio"/>	High level stops the discharge	<input type="radio"/>	Acoustical or optical alarm but no automatic action	<input type="radio"/>	No function
147	Visibility of level indication	<input checked="" type="radio"/>	Visible from discharge location Visible from control room	<input type="radio"/>	Level indication only visible close to storage tank	<input type="radio"/>	Level indication only visible after climbing on storage tank

### Venting of storage

148	Direction	<input checked="" type="radio"/>	Storage vents to safe location outside storage area	<input type="radio"/>	Storage vents to area where occasionally personnel is present	<input type="radio"/>	Storage vents inside storage building or to location where personnel is working
149	Avoidance of cross contamination	<input checked="" type="radio"/>	Venting via separate lines No connection with other storage tanks	<input type="radio"/>		<input type="radio"/>	Venting line in combination with venting of other storages
150	Vapour treatment	<input checked="" type="radio"/>	Present	<input type="radio"/>	Not present		

**Comments:**

## Risk Management & Management of Change

### Risk analysis

151	Risk analysis of installation	<input type="radio"/> Yes, specify method used....	<input type="radio"/> Internal procedure	<input type="radio"/> No special risk analysis
152	Done by	<input type="radio"/> Expert team or specialist staff	<input type="radio"/> Staff	
153	Documented	<input type="radio"/> Yes	<input type="radio"/> No	
154	Last update dd/mm/yyyy			

### Management of Change

155	Risk analysis prior to changes	<input type="radio"/> Yes, specify method used....	<input type="radio"/> Internal procedure	<input type="radio"/> No
156	Written procedures for changes	<input type="radio"/> Yes		<input type="radio"/> No
157	Responsibility for written procedures & changes	<input type="radio"/> Expert team	<input type="radio"/> Specialist staff / Other	

### Repair & maintenance

158	Regular check of safety equipment	<input type="radio"/> Yes, implementation of regular checks, according results of risk analysis	<input type="radio"/> Occasional checks	<input type="radio"/> No checks
159	Qualified maintenance providers	<input type="radio"/> Use of professional, qualified providers or specialist staff with product-knowledge and experience	<input type="radio"/> Staff or provider without special experience	
160	Permit procedures for hazardous work used	<input type="radio"/> Always	<input type="radio"/> Rarely	<input type="radio"/> Permit procedures not used

**Comments:**